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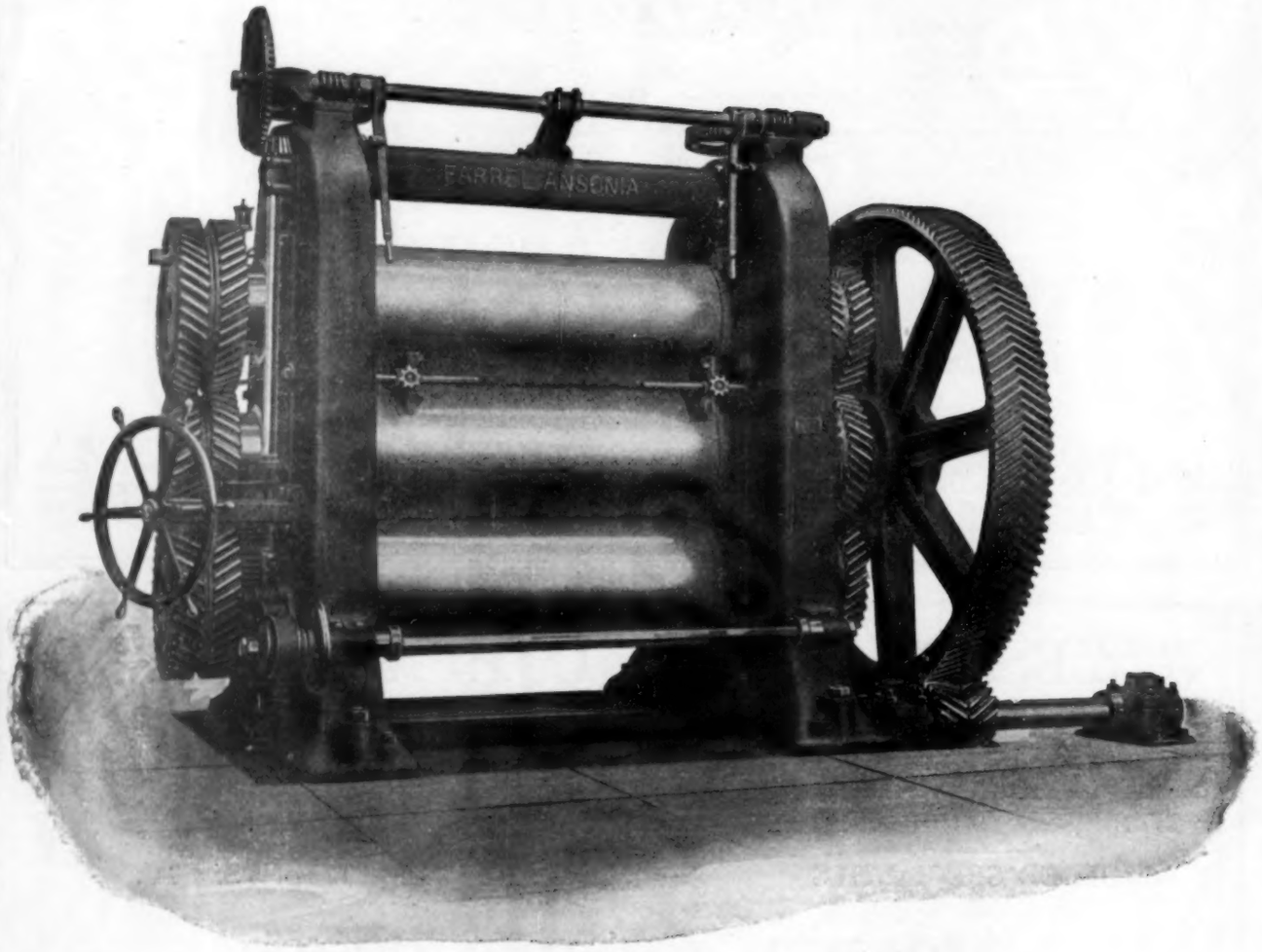

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THE RUBBER AGE AND TIRE NEWS

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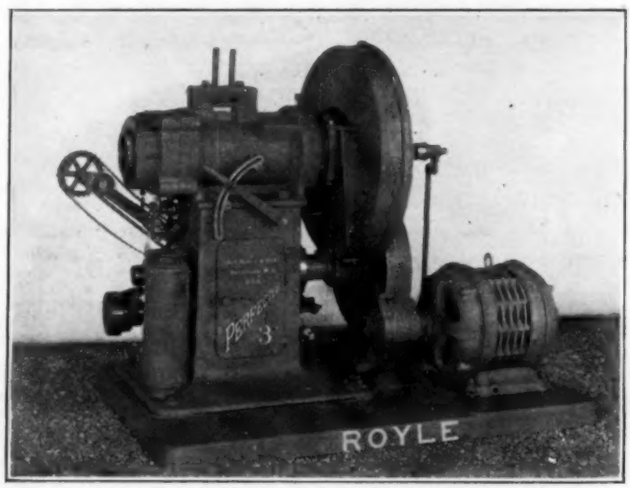
The Manufacture of Rubber Hose—II

Methods of manufacturing rubber hose can be divided into two general classes; the mandrel method, in which the hose is built up on a pole or mandrel; and the tubing method, by which the hose is formed by forcing the rubber out of a tubing machine. In many types of hose these two methods are combined.

When the former method is used, the rubber is sheeted on the calender, wound up in rolls with a cotton "liner" and taken to the hose making department, and there wrapped on mandrels made either of sherardized steel or of aluminum, the mandrels being soapstoned before receiving the sheet of rubber. The rubber is wrapped either straight or spirally on the mandrels, the edges of the sheet being skived, moistened with naphtha and rolled down carefully with a hand roller or a "stitcher." This method of building hose is mostly used where the stock used would be too soft to retain its shape after having been run through a tubing machine and for large hose that cannot be tubed.

In the tubing machine method, light kneadable compound, mixed and warmed up on a mill, are fed into tubing machines and forced out of the die in the head of the machine on to a round, slowly revolving coiling table, being powdered with soapstone as it comes out of the die.

In using a tubing machine for this class of work, account must be taken of the sizes and quantities of hose to be produced. Further, different stocks act differently in the tubing machine, and this further complicates the problem, which in most cases has to be solved experimentally.



Royle Soapstone Tubing Machine

The stock is fed into the tubing machine in strips. Inside, it is caught by the endless screw, kneaded and gradually forced forward into the head of the machine and out through the die that gives it the desired shape. The walls of the tubing machine and the stock screw itself are chambered for steam and water used in controlling their temperature and that of the stock being worked.

Where the tubing produced has very thin walls it is usually forced directly on to a mandrel, which is soapstoned and fed through the die head of the tubing machine at the same speed as that at which the tubing is spewed out of the die head. In some machines the stock screw is hollowed out in a way to permit the feeding of the core or mandrel through it into the die head. In other machines the mandrel passes through the head at right angles with the stock screw, the mouth of the die head being also at right angles with the screw.

Laying Small Hose Covers

Heavy walled tubing can be "forced" without any mandrel being necessary to conserve its shape after it leaves the die. Some manufacturers use tubing machines equipped to blow talc inside the tubing as it is formed, to preserve its shape and prevent its walls from sticking together.

Where the stock is "tubed" on to mandrels, the tubing is carried forward on an apron or conveyor belt, and is freely covered with soapstone to prevent the rubber from adhering to it. This apron is driven by a belt off a variable speed pulley that gives it the same speed as that of the rubber coming out of the die head.

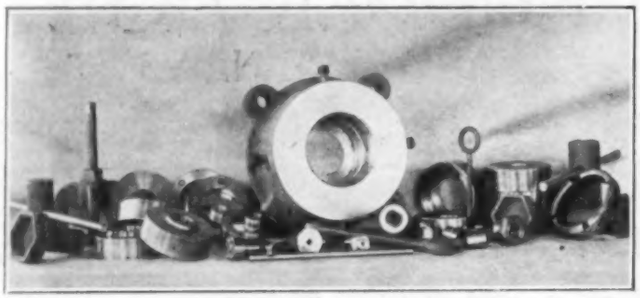
The Wrapping of Tubing

From the tubing department, the rubber on the mandrels is taken to the wrapping room to receive the fabric inserts, which are wrapped around the tubing while still on the mandrel, either by hand or by machinery.

The frictioned and skim-coated fabric is cut on the bias, and when it has been wrapped around the tubing its edges are carefully rolled down with "stitchers."

Tubing that has not been run directly on to mandrels is pulled and blown over them before receiving the cloth insert.

After the insert has been applied the hose, still on the mandrel, is tied fast to it at both ends and goes back to the tubing machine to receive its rubber cover, which is applied in the same way as described for the making of the tubing, the hose on its mandrel passing through the head of the machine, and the rubber cover being forced on to it by the machine.



Soapstone Head and Fixtures

The next step is to wrap or tape the hose to preserve its shape during vulcanization and to prevent air pockets and separation between the plies. Cotton tape is used for this purpose. The wrapping is done by a machine consisting essentially of two driven carrying-rollers, parallel to one another, on which the hose, still on its mandrel, is laid on the edge of the wrapper. Then a pressure roller, which is forced on to the top of the hose by hydraulic pressure, makes the wrapping tight as it is wound on to the hose by the carrying rollers under the guidance of the operator. The hose is thus usually covered with a wrapping of from 3 to 4 thicknesses of fabric.

Vulcanizing

Hose may be cured in a bed of soapstone, in open steam, or by internal heating. The latter method is mostly used for large hose, the ends of which are connected with steam heads and the hot steam allowed to run through it. In this case slow curing compounds are used for the inside of the hose that rests on the mandrel during the curing, and faster compounds for the outer cover. The object being to get the heat to the cover and cure it before the inner layer of rubber is overcured.

Analysis of Rubber and Rubber Goods

By J. A. S. Morrison

The usual analysis of rubber and rubber goods consists in the estimation under five heads as follows:

1. Rubber resins.
2. Free sulphur.
3. Mineral matter.
4. Vulcanized rubber.
5. Rubber substitutes.

Rubber Resins

Rasp the sample into small pieces; weigh out 4 gms., and extract with acetone in a Soxhlet extractor for two days. Dry the extract at 100 deg. C. and weigh. This extract contains rubber resins and free sulphur, the latter being estimated in the extract as described later. Total extract minus free sulphur gives rubber resins. Keep the residue from the extraction in order to determine rubber substitutes.

Mineral Matter

1 or 2 gms. are boiled with 50 cc. nitrobenzene in flat flask with air reflux, cool and wash into a 300 cc. tall beaker with a mixture of 2 vols. sulphuric ether and 1 vol. Ethyl alcohol; dilute to about 250 cc. with this mixture, stir and stand overnight to settle. Viscous deposits are due to insufficient ether, and more should be added if these occur. Filter the insoluble matter on a tarred filter, dry and weigh. This gives organic matter insoluble in nitrobenzene plus mineral matter.

Now wash the tarred filter with warm dilute HCl, wash out acid with water, dry and weigh. Finally ash the paper and residue and weigh ash. Ash plus loss due to HCl washing gives *total mineral matter*. The extraction with HCl is carried out in order to extract carbonates as such.

The difference between the total nitrobenzene residue on the tarred filter and the total mineral matter gives the *organic matter insoluble in nitrobenzene*. Carbon if used as a filling will be included in this figure.

Free Sulphur

Take acetone extract (Rubber Resins) in a flat flask, moisten with water and cautiously add 25 cc. fuming HNO_3, cooling the flask in ice. Then gently warm and finally digest on steam bath, using a funnel as cover. When action is complete wash into a porcelain dish with a few cc. of fuming HNO_3 and evaporate off all the acid. All the sulphur is now converted to sulphuric acid; intimately mix the mass with 5 gms. of a mixture of 3 parts Na_2CO_3 and 2 parts KNO_3, moisten slightly with water and mix well. Cover with a large dish and heat over a low flame till white. Cool and take up with conc. HCl, evaporate to dryness twice to precipitate silica, and then finally dissolve in dilute HCl, filter and precipitate as $BaSO_4$. Calculate back to sulphur. This gives the figure for free sulphur.

Rubber Substitutes

The residue from the acetone extraction in the determination of rubber resins is digested with 100 cc. approximately N-2 alcoholic KOH for 4 hours at 60-70 deg. C. Pour off through a filter and digest residue twice with warm alcohol. Mix filtrate and alcoholic washings and evaporate off nearly all the alcohol. Take up residue in a little cold water, transfer to a separating funnel, acidify and take out fatty acids with ether. Ether extract is then taken to dryness and weighed. This gives fatty acids of oxidised oils, and is taken as the percentage of rubber substitutes.

Vulcanized Rubber

This is obtained by subtracting the sum of the other determinations from 100.

One other determination is often carried out, i.e., total sulphur.

The method is the same as that described under free sulphur, only one uses the original rasped rubber. The difference between total and free sulphur gives combined sulphur, but as this is included in vulcanized rubber, it is seldom separately expressed. Ash is often determined by ashing in a porcelain crucible, recarbonating with ammonium carbonate solution, and finally igniting at a gentle heat. The ash is generally lower than total mineral matter because some mineral matters do not recarbonate easily. Nevertheless, it serves as a useful check on the figure for mineral matter.

Why Red Wrapped Rubber Tubing Turns Dark

By D. Repony

It is frequently observed in rubber factories that wrapped rubber tubing, when being vulcanized in open steam heat, changes from the bright color of the unvulcanized rubber compound to a darker shade during the vulcanization. The effect observed, however, is due to many complicated causes which can be divided into three different classes.

First: Darkening of the whole rubber compound throughout.

Second: Dark spots and streaks appear upon the surface of the red tubing. The rubber below the surface is unaffected.

Third: The inside of the rubber becomes black or dark in sections, especially at each end of every length.

The darkening of the rubber compound throughout is directly due to the composition of the compound.

Rubber compound which is composed of unsuitable substances containing an iron filler which will combine with sulphur or hydrogen sulphide will naturally be darkened during vulcanization, for heat effects chemical reaction.

The same effect is produced when the rubber compound contains an acid, even if the latter is only present in the most minute quantities. Some acid may get into the rubber compound with the admixture of chloro-sulphide fatty substitute, or with crimson antimony, and when these compounds contain even the best red oxide of iron (which otherwise will not be darkened by the influence of sulphur fumes of hydrogen sulphide), the acid will act upon the red oxide of iron, and will form some corresponding iron salts upon which the sulphur fumes or hydrogen sulphide will act, producing the iron sulphide which darkens the rubber compound during vulcanization. On the other hand, rubber compounds containing antimony pentasulphide will turn dark due to partial decomposition when vulcanized at high heat. When antimony is used which contains some antimony trisulphide, which might be present in the antimony in the orange-colored modification, the compound will turn to the black modification of antimony trisulphide. The remedy for overcoming the darkening of the whole rubber compound during vulcanization naturally lies in locating the cause.

The appearance of dark surfaces or irregular black streaks and spots upon the surface is due to one or a combination of all the following causes:

First, wrapped rubber tubing machines are usually made of iron tables. At any rate, on such machines there is enough iron to come in contact with the water and wrapping sheeting, with the result that rust is formed (water soluble iron salt), which gets into the wet wrapper. Then during vulcanization the rubber compound evolves sulphur fumes of hydrogen sulphide, and these combine chemically with the iron salt forming the black iron sulphide which blackens the rubber tubing surface. The darker streaks are due to the fact that the sheeting gets more iron in one section than in the other.

However, as it is customary in nearly every rubber factory to have a department unwilling to admit its own faults, but rather to attempt to put the blame for the trouble up to another department, I want to explain the various cases which the tubing department may use as arguments to blame the compound department for all the faults observed.

As has been stated before, when the rubber compound gets dark throughout, the cause undoubtedly lies in improper composition of the compound, but when it darkens only on the surface, then the different causes might be classified as follows:

When the wrapper sheeting is new and the tubing becomes black on the surface it is due to the water soluble iron present in the wrapping sheeting, although before vulcanization the sheeting apparently has not shown any rusty color, because the color merely shows the rust in suspension of small particles. On the other hand, the amount of water soluble iron hydroxide is not visible until after vulcanization, when it has become iron sulphide.

When a sheeting which is black has been used and the surface of the tubing does not turn black, it may be due to two reasons: Either the black sheeting does not get a fresh supply of iron salt during the wrapping process and the iron present in it is in the form of iron sulphide, which cannot darken the rubber, and a new reaction did not take place due to a lack of iron, or the particular rubber compound has not evolved sufficient of the active gases.

As to the peculiar effect noted when practically the same rubber compound under apparently the same conditions turns the surface dark one time and without discoloration another time, it may be due to several causes. If the wrapping sheeting is very wet due to the condensation of water or the entrance of very wet steam during the vulcanization, black iron sulphide, which is formed, will not stick sufficiently to the rubber surface and can be removed with the wrapping, while on the other hand, due to a supply of dry steam (moist enough to support the reaction), the iron sulphide which has been formed becomes baked to the rubber surface and is hard to remove.

It has been observed that a rubber compound which has been slightly scorched during mixing will evoolve considerably more of the active gases than the same compound which has been properly mixed.

The third cause for the darkening of the rubber tubing on the inside is due to the same reason, namely, that when the iron rod gets rusty and wet and the rubber evolves the active gases during vulcanization, the inside wall of the tubing will become black. If the iron rod is dry not much reaction can take place, thus explaining why the tubing is black on the ends, for the water of condensation will always find its way into the tubing for a varying distance at the ends.

So it becomes evident that the darkening of the tubing surface is due to two factors: first, it is the result of chemical reaction between sulphur fumes; or secondly, the reaction of sulphur gases with the soluble iron salt.

Evidently the elimination of either of these active factors prevents the trouble, and this can be proved by the following practical experiment.

Put a piece of the rubber tubing on a glass rod and wrap it with new sheeting moistened with water free of iron (using a glass plate table top), then put the wrapped tubing in a glass tube so that no iron from the vulcanizer can get to it, and it will be observed that this tubing after the vulcanization is practically as bright and clean as it was before vulcanization.

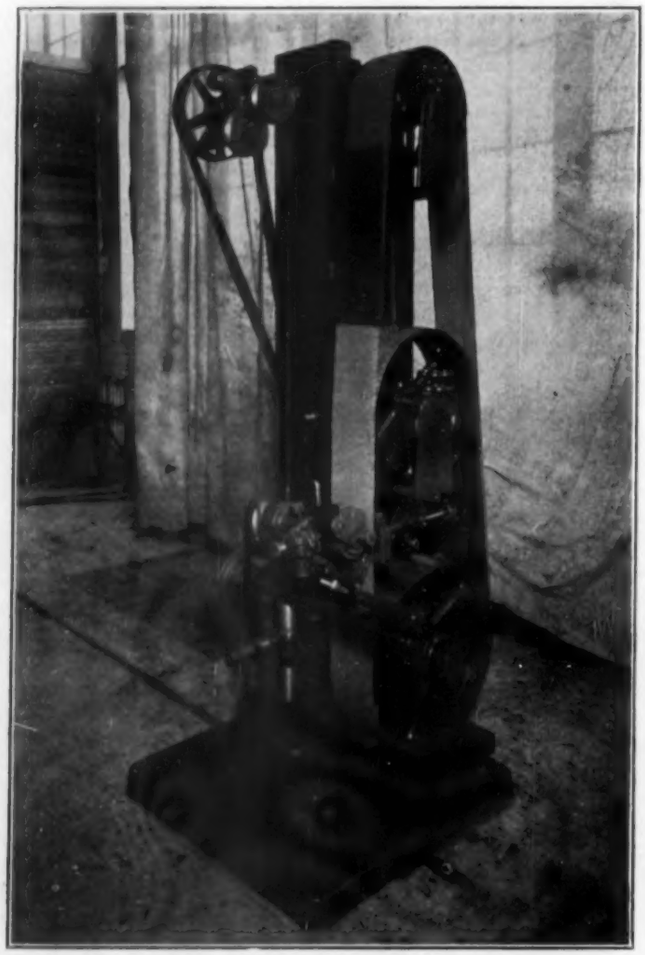
Of course, the elimination of sulphur gases will give the same result. However, it is practically impossible to produce a rubber compound which will not evolve any sulphur gases, and therefore a simple and radical remedy must be sought by the elimination of iron, and this can be done by having the wrapping machines heavily coated with tin, and also the vulcanizer, and using aluminum instead of iron rods, or iron rods heavily tin-plated.

Rendering Lampblack Dustless

It has been generally recognized that the dust from lampblack is one of the disadvantages encountered in handling this very useful material. A recent British patent has however been issued covering a process by which it is claimed that lampblack can be rendered dustless. The invention consists in placing the material in an enclosed mixer and adding water to it until it assumes a plastic condition at which point is added two to five per cent of resin oil. After the combined materials have been well mixed the resulting product is placed upon trays in a dryer and kept there under heat until the water is evaporated, the resin oil being left to form a binding medium for the minute particles of the material.

Blevney Vertical Abrasive Finishing Machine

The Blevney Machine Co., Greenfield, Mass., has brought out a polishing machine provided with an attachment for polishing tubing, this attachment being equipped with an automatic feed and a heavy fixture for holding the tubes. The machine is intended for polishing tubing and round work of all kinds, whether the material be steel, brass, rubber or anything that requires polishing. The machine is much heavier than similar machines brought out by the Blevney Machine Co. for tube polishing in the past. The base is about three

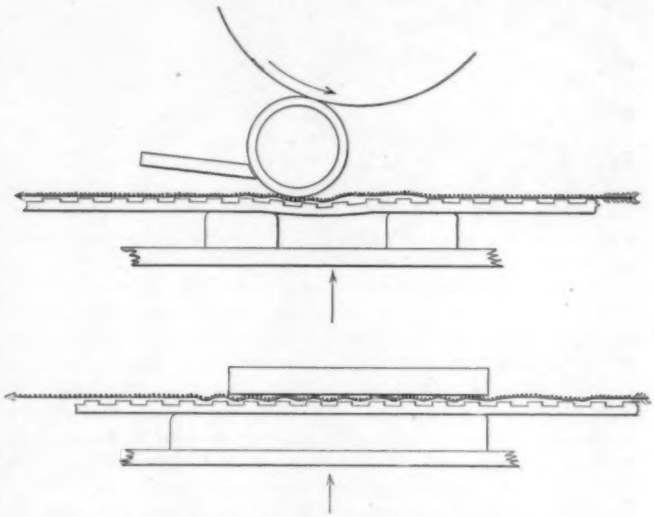


Blevney Finishing Machine

times as heavy, and the column, as well as the base, is entirely redesigned, the total weight of the machine having been about doubled.

This patented machine embodies the Blevney patent two-belt system of finishing with an Abrasive Cloth Belt running at high speed over a heavy corrugated leather cushion belt. This is the fastest finishing machine on the market. Without mechanical holding device or power-feed attachment, the work is held by hand, yet the production possible is more than 100 per cent greater than by any other method and the finish produced of a superior nature. With mechanical holding device and power feed attachment, the machine becomes automatic in operation and the production is limited only to the ability of the operator to handle the work. Skilled labor is not necessary in the use of these machines.

The Type A machine is built up on a heavy cast iron column providing the necessary rigidity for a high-speed machine. Steel ways are attached to the column, and the sliding frames in which the idler pulleys operate travel on these ways. The main pulley rests in suitable boxes in the lower part of the main column of machine, and the driving pulley is attached



Construction of Corrugated Cushion Belt

The position taken by both cushion and abrasive belts on either flat or round work is shown. The view showing round work illustrates a tube in proper finished position between feed roll and finishing belt. On flat work one flat pressure platen is provided as shown.

to the other end of the shaft. The patent cushion belt is run over the main pulley and the idler next above, traveling at a speed of 7000 ft. per min.

The cloth abrasive finishing belt is placed over the cushion belt running from the main pulley to another idler pulley operating in at frame on top of machine. The idler pulley frames in both cases are governed by weighted levers having a fulcrum journaled wheel and steel pinion forms connection with a steel rack attached to the frame. These weighted levers should be in a horizontal position when the machine is in operation, and to bring the levers to this position a spring is provided holding the pinions in engagement with the rack. By pulling the fulcrum against the action of this spring the pinion will become disengaged and the lever may be moved to any desired position, the spring restoring the engagement between pinion and rack.

The alignment of the two belts may be controlled by means of hand wheels operating on the idler pulley boxes, these wheels serving to tilt the pulleys so that the position of the belts may be changed as desired.

A suitable or stock rest is provided for holding the stock and for the application of fixtures and attachments. A spring platen or pressure bar is applied back of the cushion and finishing belts. The action of this pressure platen is controlled by a foot treadle and stops are furnished to limit the forward and return movement of this platen. Face of the platen is made to suit the work to be finished. Thus for plain, flat work the platen has a plain face. For finishing tubes or round pieces parallel strips are placed at top and bottom of platen, causing the belt to curve around the circumference of the stock being finished. Where desired, the platen may be made sectional at a slight additional cost over regular construction, or we can furnish special rotating platens with yielding centers.

The new power feed mechanism applied to this machine is distinctly novel and merits special consideration. The feed

roll is mounted on a stud giving it a swivel action. It also has a tilting provision, and when tilted to the left feeds forward; to the right feeds reverse; when in a level position the feed is neutral or there is no feed at all. These provisions adapt the machine to a variety of finishing which would be very difficult of attainment otherwise, such as the finishing of tap shanks, which are dropped into place with the feed roll neutral, finished; then with the roll reversed are fed out of the machine into a receptacle in which they are taken away.

The quick change platen is another new feature. The adjustment on this pressure platen may be quickly changed by hand nut conveniently located for the purpose. The platen plate is also quickly removable, and no tools are required for the change. It is simply lifted from its socket and substituted with a duplicate of the required form.

All work finished by the Blevney two-belt system may be held stationary or fed past the belts while the belts are brought to the work with a pre-determined pressure.

The various types in which these patent two-belt finishing machines are built afford the most convenient means for rapidly finishing metals, fiber, rubber and other materials having round, square, flat or curved surfaces.

The power feed attachment will accommodate round stock from ¼ in. to 2 in. in diameter, or larger if made special. The capacity for hand work is anything within range of the belt and the holding ability of the operator.

This machine can be used for finishing wringer rolls and rods and tubes of rubber and fiber, either hard or soft. It is especially suited for rubber because of the clearance provided for disposing of the material cut from the articles being finished. A number of inner tube manufacturers are using this machine to clean their inner tube mandrels, and one company claims that they have saved the labor of eight men through the use of this machine.

The Determination of Sulphur in Rubber

Dr. Ludwig Rosenstein has worked out a method for the determination of sulphur in rubber which is said to have found quick, simple and accurate. The method is as follows:

Weigh out exactly 0.5 grm. of the finely-ground sample and place in a 300 cc. Erlenmeyer flask. Add 15 cc. of a saturated solution of arsenic acid, 10 cc. of fuming nitric acid and 3 cc. of saturated bromine water. Cover with a watch glass and boil until the sample is completely oxidized and a clear solution is obtained, adding more fuming nitric if necessary to complete the oxidation. Evaporate to syrupy condition, then add a few crystals of potassium cholrate to insure complete oxidation and to expel oxides of nitrogen; continue the evaporation almost to dryness to insure complete expulsion of oxides of nitrogen. Cool and then take up with 50 cc. of 10 per cent. HCl; heat on steam bath until solution is complete, filter to free from any insoluble matter and dilute the filtrate to about 300 cc. From this solution the sulphur, which has been converted to sulphate, may be precipitated with barium chloride, filtered, and weighed, observing the usual procedure and precautions, with special precaution that the precipitate should be filtered from the hot solution and washed with hot water so that any lead salts will be washed out.

The function of the arsenic acid is to raise the boiling point of the solution during the oxidation, thus making it more complete and rapid. It may be prepared by adding C. P. arsenic oxide to boiling water until boiling point of solution is 140 deg. C.

Earle L. Davies, of Akron, states that this method has been tried on rubber mixes, both cured and uncured, containing known amounts of sulphur, with and without various other compounding ingredients or fillers, and has been found accurate to within less than 0.1 per cent.

Electrolytic Method for Total Lead and Zinc in Compounds

By Elmer D. Donaldson

The method consists of digestion of the ash in HNO_3 and precipitation of lead as PbO_2, followed by an evaporation and precipitation of Zn as metal, both on platinum.

The electrolytic apparatus was equipped with rotating electrode and pole-reversing switch. The larger electrodes were of platinum gauze, 1½ in. in diameter by 2 in. high, sand blasted; the rotating gauze ½ in. in diameter and 2 in. high. The apparatus was connected to 110 volt d.c. generator and lamp resistance.

Deposition of the lead as PbO_2 electrolytically is not new, but the method as given for deposition of Zn on platinum direct is a hertofore unpublished method of W. S. Kimley, used for many years for determination of the metal in bronze and brass, and adapted from that method.

Lead

Weigh 1 gm. rubber, wrap in 7 cm. ashless paper and ash in 25-30 cc. porcelain crucible. When cool brush ash into a 200 cc. electrolytic beaker, add 25 cc. conc. HNO_3 and digest on hot plate for 15 minutes, boil to expel nitrous fumes and dilute to about 125 cc. having solution 70-80 deg. C. Electrolyse with rotating cathode using a d.c. of 2 to 3 amp. The lead will come down on the large guaze anode as PbO_2, black when in large amounts, bronze colored when in small amounts. Run 30 minutes and wash anode well with water to remove mechanical impurities, then with alcohol and ether. Dry for 30 minutes at 170 deg. Weigh as PbO_2, and for convenience calculate lead to PbO. $PbO_2 \times .933 = PbO$.

Zinc

Wash the solution and insoluble from the electrolytic beaker, from which the lead has been removed, into a liter beaker, add 5 cc. conc. H_2SO_4 and evaporate dry, and drive off most of the H_2SO_4. This is done to insure complete removal of HNO_3, which would interfere with the electro disposition of Zn. When evaporation is complete, cool, digest residue, which usually contains considerable insoluble, with 50-75 cc. water. The zinc is now in the form of $ZnSO_4$ and is readily soluble. Filter and wash. If ZnO content is known to be low, use entire filtrate, but if 20 per cent. or over, catch filtrate in 200 cc. volumetric flask, make up to mark and take 50 cc. Wash this 50 cc. portion of solution representing 0.25 gm. rubber into a 200 cc. electrolytic beaker. Add considerable excess of a saturated solution of NaOH over that necessary to re-dissolve the $Zn(OH)_2$ first formed. Electrolyse at ordinary temperature at 2-2.5 amp. with, in this case, rotating anode for 20 minutes, remove and wash with water, alcohol and ether. Dry at 100 deg. for a few minutes, cool and weigh. Zn is deposited on the cathode and is weighed as metal.

Weight of $Zn \times 4 \times 1.25 = ZnO$. Al will not interfere even if the solution is gelatinous from the precipitated $Al(OH)_3$. In event that iron is present, filter off the iron hydroxide after adding just enough NaOH solution to insure solution of $Zn(OH)_2$. Then add further NaOH solution to this filtrate. PbO_2 and Zn can be dissolved from the Pt gauze using a solution of conc. HNO_3 saturated with tartaric acid.

Owen Tire to Add Building

The Owen Tire and Rubber Company announce that it is growing so rapidly that it will soon be necessary to build a large addition to the plant at Bedford, Ohio. The Owen Tire and Rubber Company is having one of the most phenomenal growths ever known in the rubber trade.

After its organization this company devoted itself almost exclusively to solid tires. Later pneumatics—both cords and fabrics together with a line of red and gray tubes—were added. The orders for all lines of Owen products but particularly for pneumatic tires are far in the advance of the present plant to take care of them.

The materials for the new addition—brick, iron, etc.—are all ready and building operations will probably start within sixty days. The new addition will be 80 feet long and 62 feet wide and two stories high. The Owen plant is built on the unit system and this allows for indefinite expansion. The plot of ground on which the Owen factory is built comprises 14 acres and there is a large surrounding acreage available for expansion when needed.

The situation of the Owen Rubber Company at Bedford is peculiarly advantageous. It is half way between Akron and Cleveland, only a few miles from either city. The plant is located directly upon the Wheeling & Lake Erie Railroad with a spur of a track to the shipping room and the Pennsylvania Railroad is less than a mile away. The Owen Company handles its orders from a single tire to car load lots with ease and dispatch.

Industrial Transportation by Bicycle

The Bicycle Manufacturers' Association have published and issued a twenty-eight page booklet entitled Industrial Transportation for distribution to anyone interested in the bicycle industry.

The booklet has been issued to call attention to industrial concerns as to the advantage of a bicycle as a method of transportation for workingmen and women. No mention is made of the name or manufacturer of any particular bicycle. The booklet is made up of an analysis of the present means of transportation with facts to show that the bicycle has the lowest cost for upkeep when compared to its usefulness and that it is the cheapest means of transportation between any two given points.

Steele-Alderfer Booklet

A new booklet has been issued by the Steele-Alderfer Company, Cuyahoga Falls, Ohio, on Assembling and Packing Tire Crates. It consists of sixteen well illustrated pages showing the various steps in assembling the crate, sawing off slats, putting on the heads and a number of other operations.

Dimensions of the various size crates are given as are also the weights. In addition the freight tariff classifications for the several sections of the country are included. It is an interesting booklet and may be obtained by writing to the company.

Business Is Active in Akron

(Special Akron Correspondence.)

Reports were current here recently that several of the large rubber companies were busy on plans that would greatly increase their tire production in the near future.

The B. F. Goodrich Rubber Company, it was said, was planning to enlarge its factory to double its tire output—from 20,000 to 40,000 a day. Officials of the company declared they had no definite plans for such an extension, but added that they were busy getting things in shape to increase the output.

Goodrich is now building an immense warehouse and mill room and when this addition is completed, changes probably will be made in the factory which will greatly increase production.

The other report concerned the Firestone Tire & Rubber Company. This company, it was said, would build a new office building opposite plant No. 2 soon and use the space now occupied by offices in plant No. 1 for manufacturing purposes. No official announcement has been made.

Firestone recently announced that new additions had increased the capacity of the factory to 36,000 tires a day. The output is now around the 20,000 mark, it is said.

The fact that orders so greatly exceed production in nearly all the rubber plants has caused sudden activity in expansion throughout the Akron manufacturing district.

It is estimated that 20,000 more employees will be added to local rubber companies' payrolls before the end of the coming winter.

Builders are pushing work on factory additions and contractors are busy erecting houses to take care of the new workers. Already this year 2,500 dwellings have been built within the city limits, and many have been erected in the suburbs. Effort is being made to double this number before the end of the year.

Pearce and Ideal Tire Merger?

(Special Akron Correspondence.)

Local rubber circles were interested in the announcement that the Pearce Tire & Rubber Company of Ashtabula, O., is to effect a merger with the Ideal Tire & Rubber Company of Cleveland. The business at both plants will be conducted under the name of the Ideal and 2,000 tires will be manufactured daily. Ideal interests are capitalized at $5,000,000. Several Akron men are financially interested.

Zenith Capitalizes at Ten Million

(Special Akron Correspondence.)

The Zenith Tire & Rubber Company, made up of Cleveland and Akron business men, with a capital stock of $10,000,000, has purchased the Belle Vernon farm near Willoughby and plans immediate construction of a factory on part of the 236 acres. The consideration was around $250,000. Contracts will be let at once for construction of a factory, administration building, and power plant to cost $1,000,000.

Final organization of the Zenith Company, it is said, marks the completion of plans launched several months ago in which French and English capital has been materially interested. Akron tire experts also are interested in the company and several patents covering the construction of tires have been obtained.

The company already has purchased a small rubber factory and plans to buy others, it is said. Announcement also is made that the capital stock will be doubled at an early date.

Lambert with Elco

L. B. Lambert, who has been with the Times Square Auto Supply Company for some time, is now Sales Manager for the Elco Manufacturing Company, who make "Elco Patch" at Wichita, Kansas.

Akron Takes Up House Building

Confronted with the necessity of absorbing more than 1,000 new citizens each week, Akron has determined to do the job "joyfully and right" by making "Homes for all." It will pioneer the way for other industrial centers by carrying municipal housing theory into practice.

A $5,000,000 house-building plan, supported by citizens of high and low financial estate, has been called into requisition. The initial construction work, which is now getting under way, involves all the activity of a War-time cantonment city. Five thousand new homes, sufficient to house 20,000 persons, are expected to be completed within a few months.

Akron lays claim to being the most thriving city in the United States today. Government employment bureau statistics support the claim by reports showing that while numerous other cities have their armies of unemployed, this city tops the list of cities offering jobs generally with 2,000 places open, despite the number of men and women coming in each day. The plants of the largest rubber companies are working twenty-four hours each day except Sunday, but cannot keep up with orders.

Plant enlargements have been planned, but action has been postponed in many instances because of housing difficulties in the city. Figures compiled at the factories show that there are at present approximately 6,000 men here whose families live elsewhere. The greater portion of these men want to rent, buy or build homes.

The $5,000,000 plan seeks to relieve the situation by building houses to let at reasonable rents to newcomers, building houses to sell at a small payment down, and financing the workman who has a lot and wants to build a house on it.

It is believed the principal part of the $5,000,000 subscribed will eventually find its way into second mortgages, which will be handled at a reasonable figure, at relatively low interest. Second mortgages are now dealt in by companies which charge from 15 to 30 per cent. commission and interest at rates practically prohibitive.

Factory heads, business men and many workmen have subscribed to the corporation which was formed to carry the project through. It was initiated by H. S. Firestone, who subscribed the first $500,000. As a manufacturer, Mr. Firestone has always believed that quality production can only be attained and maintained through the co-operation of satisfied workmen.

This latest step by the Rubber City on its way to the peak position among the forward-looking industrial municipalities of the United States, is supplementing efforts on the part of factory heads who are working individually to house their workmen. During July, construction of 100 houses for Firestone employees was started. Through Mr. Firestone's efforts the material will be obtained for them in wholesale lots at greatly reduced prices, the services of the architects will be secured at nominal expense, while general construction work will be fully twenty per cent lower than contractor's prices in the open market.

To keep pace with this house-building program, the city government is spending $20,000,000 on public improvements.

Hood Moves Milwaukee Branch

The Milwaukee, Wis., branch of the Hood Tire Company, Watertown, Mass., has been moved to 119 Tenth Street, South, that city.

U. S. Rubber to Issue New Stock

Business Has Almost Tripled in Four Years—Capital Stock Has Remained the Same During That Period—Company Has Been Unable to Meet Demands for Products

Directors of the United States Rubber Company recently recommended that the company issue $36,000,000 additional common stock and offer it at par to stockholders, that the common stock be placed upon an eight per cent basis, and that an extra distribution either in cash or in stock be made in 1920.

To enable them to carry out these recommendations the directors decided to ask the stockholders to authorize an increase in the first preferred stock from $70,000,000 to $100,000,000, and of the common stock from $40,000,000 to $200,000,000. The second preferred stock will be retired.

A special meeting of stockholders will be held at New Brunswick, N. J., September 9 to ratify the plan. It is understood that Kuhn, Loeb & Co. will underwrite the new isue of common stock.

In a communication to the directors of the company urging the foregoing action, Samuel P. Colt, chairman of the board, said:—

"After careful consideration of the subject, your chairman would recommend that steps be taken to amend the certificate of organization of the company to provide for an authorized increase in its capital stock up to $100,000,000 first preferred and $200,000,000 common stock and the retirement of the second preferred stock, the greater part of which already has been acquired by the company. The present authorized capitalization is: First preferred stock, $70,000,000; second preferred stock, $10,000,000; common stock, $40,000,000. Total, $120,000,000.

"The capital now issued and outstanding is: First preferred stock, $63,022,100; second preferred stock, $403,600; common stock, $36,000,000. Total, $99,425,700.

"The volume of business transacted by the company for five years, in round numbers, was: In 1914, $83,000,000; in 1915, $92,000,000; in 1916, $126,000,000; in 1917, $176,000,000, and in 1918, $215,000,000.

"During that period the capital stock of the company has remained substantially the same. The indebtedness of the company was funded in 1917 into long term five per cent bonds. The surplus earnings for the year 1917 and 1918 were equivalent each year to about thirty per cent on the common stock and the earnings for the first half of 1919 have been substantially the same as the first half of 1918.

"Your company is engaged in a business capable on conservative lines of large expansion, the tire business both of passenger vehicles and trucks being a notable example of this. For the last two years your company has been unable to meet the demand for its tires, and notwithstanding its capacity already has been substantially increased, further construction has been authorized which will require in the neighborhood of $15,000,000 for its completion, and which will double the present capacity of the company for producing tires.

"The amount of present outstanding common stock compared with the property of the company is relatively very small. In view of these conditions your chairman would recommend, upon the certificate of organization being amended as proposed, that $36,000,000 of additional common stock be issued and offered to our common stockholders at par, in order to provide ample capital to meet the enlarged business of the company without the application of so large a proportion of earnings for that purpose as has been done for the past few years.

"Your chairman also is of opinion that the company now is amply justified in placing its common stock upon an eight per cent dividend basis, and he therefore would recommend that dividends at the rate of eight per cent per annum be paid upon the common stock of the company beginning in October next, and further, that an extra distribution, either in stock or in cash, such as may be warranted under all conditions, be made early in 1920 to common stockholders."

Bacon Heads McGraw Sales

The McGraw Tire & Rubber Company announces the appointment of H. M. Bacon as General Sales Manager, with

H. M. Bacon

headquarters at the company's main office in Cleveland, Ohio.

Mr. Bacon comes from the Diamond Rubber Company where he has been in charge of sales since 1914. He is well known throughout the tire and motor car industry. After a long experience in the motor car field, he joined the Diamond Rubber Company in 1911 and became its sales head three years later.

The association of Mr. Bacon with the McGraw Tire & Rubber Company is an evidence of this company's rapid growth into one of the big factors in the tire business. New branches have recently been opened in Boston, Baltimore, Detroit and Denver. According to information received from the company's sales officials, branches will open in several additional cities very shortly.

Federal Opens Richmond Warehouse

The Federal Rubber Company of Illinois announces the establishment of a distributing center in Richmond, Va. This was found expedient, because of the increase in the demands for its products in the Atlantic coast district, which heretofore has been served solely through the company's New York offices.

This latest branch will carry a complete stock of Federal tires and accessories, thus assuring prompt deliveries throughout the territory.

G. P. Blodgett has been appointed manager of the Richmond warehouse, and will supervise the sales work throughout the district. Mr. Charles McGinnis, formerly connected with the Federal Rubber Company's New York warehouse, has been named as office manager, and will have full charge of the general business affairs of the Richmond offices.

The Richmond warehouse is the fourth new branch established by the Federal Rubber Company since March 1, the others being situated at Pittsburgh, Pa., Omaha, Neb., and Oklahoma City, Okla.

Heads Firestone Accounting Class

(Special Akron Correspondence.)

H. C. Miller, former treasurer of the Northern Indiana Gas and Electric Co., and just recently special accountant for Swift & Co., has been appointed head of the new class in accounting that has been opened for Firestone employees. Miller is working in conjunction with S. G. Robinson, general auditor of the plant. The classes are free to the employees.

Rohrer Resigns at Goodrich

P. S. Rohrer, formerly secretary to H. T. Waller in the Educational Department at the B. F. Goodrich plant and later secretary to A. A. Nigosian, who has just resigned to accept the position of head of an agriculture experimental station in Armenia, has been named as head of the department to succeed Nigosian.

Sanderson Is Superintendent for Amazon

Robert M. Sanderson has resigned as superintendent of raw materials at the Miller Rubber Company to become general superintendent at the Amazon Tire & Rubber Company. In five days more Mr. Sanderson would have completed exactly eleven years of service at Miller, having come there August 17, 1908.

Arthur W. Stoner, another Miller veteran, also recently resigned as superintendent of Departments 43 to 50 and moved his family to Salem, O., where he has purchased a shop where he will deal in automobile tires and accessories.

Firestone Sales for 1919

The Firestone Tire & Rubber Company is expected to show gross sales of $90,000,000 for the fiscal year ending October 31, next, as compared with sales of $75,801,000 for the same period in 1917-1918. Net profits in these sales, after depreciation but before federal taxes, are expected to aggregate $10,000,000 equal to about $27 per share on the 350,000 shares of common stock, after the preferred stock dividends have been taken care of. The 1917-1918 sales of $90,000,000 compare with sales of only $7,462,000 in the period 1910-1911.

Firestone Plans Picnic

Plans for the huge Labor Day celebration to be held by the employees of the Firestone Tire and Rubber Co. have been completed by Athletic Director Ed Day and the Firestone Park Civic Association.

The events are to start at 1:30 o'clock in the afternoon, the time until the picnic luncheon, being given over to games and contests between the employees and their families.

Six events are carded for the men; 100-yard dash, high jump, broad jump, shot put, tire-rolling contest and tug-of-war.

The women are to have three events, 50-yard dash, baseball throw and a nail-driving contest.

Five contests are listed for boys 14 years of age and under. They are a 50-yard dash, high jump, pie-eating contest, three-legged race and a shoe race.

Girls 14 years of age and under will take part in four events; a 50-yard dash, peanut race, baseball throw and broad jump.

A baseball game between the Firestone A. I. A. A. team and the Rim Plant crew in the Factory League will be a feature event.

Following the picnic luncheon at night there will be a band concert under the direction of the Firestone Park Civic Association and late at night an open-air movie show will be given. Other features are on the Civic Association's program but have not been announced.

Merchandise prizes are to be awarded in all the athletic events staged in the afternoon.

Mason Incorporates Housing Company

The Mason Tire and Rubber Co. and Mason Cotton Fabrics Co. with a combination of capital in the amount of $100,000 has incorporated the Mason Housing Company for the purpose of caring for the Mason employees and their housing questions.

The Housing Company is now doing business and within the next four months 26 fine homes will be available to Mason employees.

The company has purchased eleven homes built this summer by the Kent Building Company, located on Rockwell, Woodard and N. Mantua Sts.

A contract is being let for the erection of fifteen more houses of similar quality, which will be completed this fall. These fifteen will be located on N. Mantua St.

Sterling Appointment for De Witt

The Sterling Tire Corporation announces the appointment of Frank De Witt to the management of the Reading Branch territory. Jack Campbell will continue in charge of business in that section with headquarters at the Philadelphia Branch which is soon to be housed in a new building on Broad Street.

French Import Duty on Tires

According to a cablegram from Commercial Attaché C. D. Snow, Paris, the French Direction Gênerale des Douanes have issued instructions to the French customs officials that the former specific rates of duty should henceforth be applicable to automobile tires with the addition of the new ad valorem surtaxes. The rate of duty on pneumatic tires, casings and inner tubes for automobiles imported from the United States is therefore $13.13 per 100 lb. net weight plus 10 per cent. ad valorem. Under the minimum tariff, which applies to imports from the United Kingdom and certain other countries, the present rate is $8.75 per 100 lb. plus 5 per cent. ad valorem. Under a recent ruling automobile tires had been dutiable at the rate of 70 per cent. ad valorem, together with automobiles weighing less than 2,500 kilos (5,509 lb.), and parts for the same, and this rate continues to apply to other parts when intended for automobiles weighing less than 2,500 kilos.

Kelly to Remain in Akron

(Special Akron Correspondence.)

Directors of the Kelly-Springfield Tire Company have made application to list the new issue of preferred stock on the Cleveland and Akron stock exchanges. The authorized amount of the issue is $5,860,000 bearing 8 per cent interest.

It is interesting to note that the Kelly-Springfield may maintain its factory in Akron even after the big $10,000,000 factory at Cumberland, Md., is completed. Growth of business probably will make it necessary to use all four plants owned by the company to keep up with orders, it is said.

The Hunkin Conkey Construction Company of Cleveland and Akron has a $1,000,000 contract for the first unit of the Cumberland plant.

Star Doubles Dividends on Common Stock

(Special Akron Correspondence.)

Star Rubber Company directors have doubled the dividends on common stock, placing it on a 12 per cent basis. President L. H. Firey of the company is making the announcement, said the directors felt the earnings were large enough now to permit dividend payments on the common stock issue on the higher basis. Star common rose on the local market to over 300 in anticipation of this increase in dividends.

Rubber Missionaries to Foreign Countries

Akron rubber companies are sending more trade missionaries into foreign countries. Passports were issued recently for Frank T. Maggenes to travel in South and Central America for Goodyear; for Addison Richards to go to South America for the same company; for Otto J. Smith to travel in England for Goodrich; and for H. M. Parker to go to Europe in the interest of Goodyear.

Gunsalus Returns to Firestone

P. M. Gunsalus, who in 1917 left his position of advertising representative of the Minneapolis, Minn., branch of the Firestone Tire & Rubber Company, Akron, Ohio, to enter the army, has returned to civilan life, and is back with the Firestone as advertising representative and head of the Firestone "Ship-by Truck" Bureau in Minneapolis.

F. X. Newman with Valve Co.

F. X. Newman has resigned his position with the Wright-Martin Aircraft Corporation, New Brunswick, N. J., to become vice-president and sales manager of the Automatic Safety Tire Valve Corporation, Long Island City, N. Y.

Carlisle Tire Addition Completed

The Carlisle Tire & Rubber Company, Carlisle, Pa., has completed a new addition to its factory. The new structure, which is of steel and glass, three stories high, 300 by 190 feet, will practically double the plant's facilities.

H. P. Thompson

News of the sudden death of H. P. Thompson on July 1 came as a great shock to his friends and associates. He was only in his thirties and so far as most of us knew, he was in the best of health.

H. P. Thompson was one of the oldest employees of the Kelly-Springfield Tire Company. He began as a salesman, working out of the St. Louis branch in the State of Texas. As business increased, Dallas was made a depot and later a branch, of which he was made manager. Under his able administration the Texas business was increased so rapidly that San Antonio and El Paso were made depot points under the direction of Mr. Thompson, who last year was promoted to be District Manager.

Mr. Thompson had an exceedingly engaging personality. He was a veritable human dynamo, loving his work with a devotion that won for him the highest possible esteem and respect from his associates. Had he lived, he would in all probability have enjoyed the distinction of having made the greatest progress of any branch manager this season. He was born in Texas and knew the Lone Star State, big as it is, as the small-town man knows his main street. Everybody knew and liked Mr. Thompson and he reciprocated the general affection.

He was for several years in the United States Navy, and served as a gunner during the Spanish-American War, during which he saw active service with the fleet at Santiago.

His untimely death is a great loss to the Kelly organization, which to a man extends its sincerest sympathy to his wife and mother, who survive him.

Co-operative Store for Workmen

Firestone workers are to be freed from the clutches of "food profiteers," it was learned recently through an announcement of a "co-operative" store, soon to be opened in the Firestone clubhouse.

Here stable food articles will be sold to the big factory workers at original cost, plus the cost of handling the foodstuffs.

The store will soon be opened in the clubhouse and will be under the management of Don Sixx, a man who knows the food markets and is experienced in the handling of grocery business.

It is the first step taken by a large industrial concern of Akron to smash high prices, but it is believed that other factories will take similar action soon by the opening of other "co-operative" stores.

Brunswick-Balke-Collender Changes

H. G. Vanderhoef has been promoted to General Sales Manager of the Hard Rubber and Electric Storage Battery Jar Department of The Brunswick-Balke-Collender Co.

Sam J. Turnes, Advertising Manager, becomes General Sales Manager of the Tire Department, to succeed John W. Maguire who has resigned to engage in another line.

Braender Export Department

The Braender Rubber & Tire Company, Rutherford, N. J., announces the removal of its export department to 32 Broadway, New York City, after May 1. At the present time this department is located at 315 Fourth Avenue, New York City.

Chemical Industries Exposition

The Forthcoming Chemical Exposition at Chicago Is Expected to Bring Together the Largest Number of Chemists Since the United States Entered the War

The forthcoming National Exposition of Chemical Industries at the Coliseum and First Regiment Armory, Chicago, during the week of Sept. 22nd to 27th, inclusive, holds possibilities of as great benefit to American chemical industry as in the past during the war period when it contributed so directly to the firm establishment of a chemical industry in this country. This exposition will prove that the chemical industry in this country is advancing with leaps and bounds, that the industries are flourishing and that the end is not yet in sight. It will show what optimism has done for the country and what a continued spirit of optimism can do.

The fields of organic chemistry in dyes, pharmaceuticals and various organic technical products have made great strides in the last year, and will demonstrate that the greatest achievements in the war period were not of organic products for the taking of life alone or for temporarily incapacitating men. The technical organic chemical products will probably arouse the greatest interest, being as they were, nearly all developed for war use, a great many in the way of protection against water or disintegrating or corosive liquids, gases and fire. These products, now on a peace basis, are finding their way into the mechanical industries and the arts. These are decided improvements and will take the place largely of many natural products having less desirable properties.

The mineral world and mineral utilization will come in for its share of recognition and will show that in the general advancement of the chemical industries it has taken no small part. Ceramics will be brought strongly to the front through exhibits of products and materials developed for specific purposes during the war period and just now permitted free display for the industries that can use them.

Of plant equipment used for distinct chemical reactions, there will be large numbers of exhibits. It will surprise many to view these and consider the various and unexpected applications for the industries in which they enter. While designed for some particular purpose in a chemical plant, they have been found of even greater service in far removed and dissimilar industries. There will be many engineering devices and articles of equipment for plants and factories in general, placed in the exposition by manufacturers upon whom the seeds of chemical knowledge distributed throughout the country in the past four years have not fallen barren. They have realized that the expression "chemical industries" is more comprehensive than the mere manufacture of chemicals. Notable among these exhibits are those of conveying systems, elevating systems, weighing and measuring devices, tiering and stacking machinery, as well as hoists and cranes.

The indifference of some manufacturers in regard to the health and welfare of workers in plant, factory and mine is now being offset by a growing and active interest in the welfare and protection of the employee from danger through disease, accident or any of the hazards attending the particular industries. The workman's body parts are being protected by varied kinds of protective equipment for the chemical, gas, electrical, metal smelting, mining and manufacturing industries; his eyes by goggles and shields; his breathing apparatus by masks, hoods and breathing pieces; his health through his stomach by various devices and methods, and the prevention of accidents by signals and devices. Of these safety appliances there will be exhibits of varied interest.

The program of the exposition, the managers advise, as being arranged, will be one of much interest. The meetings of the societies which are meeting in conjunction with the exposition are scheduled for the following dates:

American Institute Mining and Metallurgical Engineers, Sept. 22-27.

American Ceramic Society, Sept. 24.

American Electrochemical Society, Sept. 24 to 26.

Technical Association, Pulp and Paper Industry, Sept. 24 to 27.

There is also being arranged a program of speakers and motion pictures by the exposition managers. The speakers will be of national prominence and men of affairs from the midwest will be there to welcome the visitors from other parts of the country and speakers from the industries known to all our readers will be present.

Many exhibitors are bringing moving picture films they are now preparing. The U. S. Government is now preparing numerous technical subject films through the Bureau of Mines, embracing all of that Bureau's work, and these will have their first showing at the exposition. The Bureau of Commercial Economics at Washington is again co-operating with the exposition in equipping it with films now being made.

The Bray Studios is preparing for showing at the exposition several films in which they will show by their unusual and interesting drawings, taken in such rapid sequence as to seem in motion, the manner and conduct of chemical action and reactions usually invisible to the eye and only conceived by the mind in abstract form. This in itself will be a feature worth attending for, particularly since the showing of these films will be elaborated and discussed by Jam Handy, vice-president of Bray Studios.

The managers, Charles F. Roth and Fred W. Payne, are located in their Chicago office at 417 South Dearborn street.

Firestone Starts Rim Plant

(Special Akron Correspondence.)

The Firestone Steel Products Company, this month started work on its new steel products plant directly south of plant No. 2. The building will be 250 by 850 feet and it is expected to have it under roof by October 1. Orders for Firestone rims have been more than double the capacity of the present plant, it is said, and the new one is being built to take care of the business.

When ground was broken for the new plant, many gardens planted by employees were destroyed. Garden experts appraised the value of the growing vegetables and all employees were liberally reimbursed.

Akron Men Interested

The Arnold Rubber Co. has been launched at Ravenna. It will manufacture heels, soles and molded goods. All of the officers are Akron men. They are: George Hopkinson, president; C. W. Arnold, secretary and treasurer; H. W. Arnold, vice-president and managing director. J. H. Smith is chief chemist and director.

Hutler with Firestone

A. Hutler has accepted a position in the industrial engineering department of the Firestone Tire and Rubber Company. Mr. Hutler was formerly superintendent

A. HUTLER

for an eastern rubber concern and later founded and acted as Vice-President and General Manager of the Premier Rubber and Insulation Company of Dayton, Ohio.

New Purchasing Agent for Mason

C. D. Rockwood, former assistant purchasing agent with the Firestone Tire & Rubber Co., has taken up the duties of purchasing agent for The Mason Tire & Rubber Co., to succeed J. P. Matthews, who relinquished his department on August 1, to become eastern representative for the company.

Mr. Rockwood goes to Mason with a wide experience of buying gleaned from nearly thirteen years of service in purchasing from two of the state's large industries, the Firestone Tire & Rubber Co., Akron, and the National Carbon Co., Cleveland.

With the Firestone for four years Mr. Rockwood held the position of assistant purchasing agent. Besides having experience in all lines of purchases for the company he received particular experience along mechanical lines, for some time having charge of the buying of all necessary mechanical equipment.

Prior to his service at the Firestone he was for eight years with the National Carbon Co., of Cleveland, as purchasing agent. While in the employment of this company he had experience in research work.

Mr. Rockwood is now a resident of Akron but states that as soon as possible he will make his home in Kent.

Perfect Rubber's Plans

The Perfect Rubber Company, Mansfield, Ohio, which was formed recently, has acquired a site on Wayne Street, Mansfield, and will rush the construction of a modern plant that has been designed by Althouse & Jones, architects.

The first unit of the plant will be a brick and concrete, stone and tile construction of the most approved up-to-date design. It will be fireproof throughout. Considerable time has been devoted to the selecttion of machinery and equipment, and it is believed that the plant will be the best installed of its ind, employing 400 people to start.

The company will begin with the manufacture of rubber novelties, water-bottles, dipped goods, and a general line of rubber sundries. Tires and tubes will be added later.

The company is said to already have orders enough to take its entire output for some time.

The Perfect Rubber Company was incorporated on June 19, 1919, for $100,000, fully paid up stock. At a recent meeting of the board of directors the following officers were elected: C. H. Voegele, president; E. O. Townsend, vice-president; J. M. Pittney, secretary and general manager; F. M. Bushnell, treasurer; J. S. Heil, general sales manager. The board of directors, in addition to the officers includes L. C. Chase and A. C. Moore.

J. M. Pittney, secretary and general manager of the new company, was formerly an efficiency engineer with the Faultless Rubber Company, Ashland, Ohio.

J. S. Heil, the sales manager, was also connected with the Faultless, having been assistant sales manager of that company. Previous to his connection with the Faultless, he was associated with the M. P. Gould Company, advertising agents and merchandising experts, New York City.

Mohawk Adds Large Jobber

A still further increase in the distribution facilities of the Mohawk Rubber Company on the Coast, has been made through their appointment of the Rubber Service Company, 1023 East Pike Street, as the Distributors for Seattle, Washington. Their first carload of Mohawk Tires has been shipped. They will carry a large stock of Mohawk casings and tubes, special attention being paid to the Mohawk Cord Tires.

This is one more link in the chain of branches and distributing stations the Mohawk Rubber Company has been throwing over the entire country, for the purpose of placing a full stock of Mohawk tires and tubes within a few hours shipping distance of every dealer in the country.

Credit Manager Appointed

C. M. French, for many years with the Portage Rubber Company, has been appointed Credit Manager of the Owen Tire & Rubber Company. Mr. French is well known in the rubber trade throughout the United States.

Goodyear May Build Aviation Station

Goodyear may put in a $1,500,000 aviation station at its Los Angeles plant according to "The Cotton Boll" the company paper issued by the Southwest Cotton Co., the Goodyear subsidiary in Arizona.

Lieut. H. W. Johnson, who has been flying the Goodyear airplane over the cotton plantation, is reported to be slated to take charge. Johnson was an American "ace" during the war with eleven German planes to his credit.

Balloon development has long been a hobby of F. A. Seiberling's, dating back beyond the time of the ill-fated Vaniman flight and the time that R. H. Upson and R. A. D. Preston captured the James Gordon Bennett cup race out of Paris in 1913. He had been ambitious for a Goodyear-built dirigible to be the first to cross the Atlantic, the accident to the A-4 at St. Johns when it was blown out to sea just as it was ready to start for Europe being felt as a keen disappointment at the big East Akron factory.

It is pointed out that training work with balloons could be continued twelve months out of the year at the Los Angeles Goodyear.

M. A. M. A. to Meet in Buffalo

An important meeting of The Motor and Accessory Manufacturers Association will be held at Buffalo on September 11th and 12th, at the Hotel Lafayette.

The meeting will be primarily a Credit Managers' Convention, but general executives of the various companies of the Association are expected to attend, as subjects of direct and vital importance to business in general and the automotive industry in particular will be discussed.

In announcing the Convention, M. L. Heminway, General Manager of the Association, said:

"In addition to strictly credit matters, business conditions in the automotive industry in general will be discussed by representative speakers who hold commanding positions in their particular branches of the industry. The names of the speakers and other details will be announced shortly. The paramount problems now facing the American business as a whole, and especially the automotive industry, will be discussed, and for this reason we urge that the chief executives of member companies make special exort to attend the convention.

"This is not to be regarded as a perfunctory or routine meeting. It will be a thought-stimulating get-together convention. In view of the acute and pressing problems brought about by the readjustment to peace conditions, a large and representative attendance is desirable."

New Sterling Building in Chicago

The building now being erected for the Sterling Rubber Corporation in Chicago will be ready for occupancy about October. It will be 160 feet deep, two stories high and located at 18th Street and Michigan Avenue, in the heart of the tire business.

Several Directors for Mason

E. G. Tillotson, senior member of the firm of Tillotson & Wolcott of Cleveland, and W. R. Green, Secretary of the Guardian Savings & Trust Company, Cleveland, were elected to the Board of Directors of the Mason Tire & Rubber Company of Kent, on July 31st, filling the vacancies caused by the recent death of D. N. Mason and the resignation of M. B. Mason.

Advance Rubber Company

The Advance Rubber Company advise that their property in Brooklyn on which they intend a build a new plant is 200x130 feet instead of 120x130 feet, as announced in our last issue. We take pleasure in making this correction.

Akron Stock Prices

(Special Akron Correspondence.)

Most rubber stocks listed on the Akron exchange have successfully resisted the downward trend which has featured recent dealings on the New York market. In fact Goodyear common rose 17 points to 350 during the week ending August 16 and dropped to 346 when it went to ex-dividend. Several of the strong preferred issues advanced fractions.

Firestone common which recently experienced a rapid advance, dropped 8½ points during the week, closing at 170½. Miller common fell six points to 215, but only 35 shares changed hands in the six-day period. Other stocks were fairly steady.

Following are the quotations on August 16:

	Bid.	Asked.
American Rub. & Tire	55	..
do pfd.	105	..
Amazon Rubber	140	150
Firestone	168	174
do pfd.	99½	101½
General Tire	480	..
do pfd.	99	100
B. F. Goodrich	74	77
do pfd.	102	103
Goodyear	345	350
do 1st pfd.	105¾	106½
do 2nd pfd.	107	107¾
India Rubber	217	223
Kelly-Springfield	125	128
Mason Tire	24½	..
do pfd.	87	..
Marathon com.	..	55
Miller Rubber	213	218
do 1st pfd.	103½	104½
do 2nd pfd.	105¼	105¾
Mohawk	303	..
do pfd.	100	110
Portage Rubber	143	148
do pfd	97	98
Republic Rubber	6¾	7½
do 1st pfd.	..	96
do 2nd pfd.	..	92
Rubber Products	144	149
Star Rubber	300	350
do pfd.	..	99
Swinehart	86	90
do pfd.	88	92

U. S. Rubber Holdings

The United States Rubber Company now owns the largest group of rubber estates in the world, in its holdings of about 90,000 acres in Sumatra, of which acreage 45,000 acres are fully planted. There are more than 5,000,000 trees on the planted area. About 85 per cent of these trees are now in bearing, and with more and more of the young trees arriving at the bearing age, and all the trees yielding more rubber with their increasing girth, the production of the plantations is being steadily accelerated. Extensions to the planted area are expected to be made within the near future.

The planting of the United States Rubber Company's Sumatra properties was begun in June, 1910, and by the end of that year, 15,000 acres had been planted with growing trees. By the close of 1913, this area had been increased to about 34,000 acres. The trees were planted 19 feet apart each way, 121 trees to the acre, with the intention of bringing 100 trees per acre into bearing.

At the beginning of the planting, the plantation overseers promised officials of the company that they would have rubber from their own plantation within five years, but the growth was more rapid and healthy than had been looked for and rubber was obtained from the newly-planted trees within four years. There are approximately 20,000 coolies employed on the plantations at the present time.

Mason Tire in Milwaukee

The Mason Tire & Rubber Co. has opened a branch at 450 Jackson street, Milwaukee. E. E. Gessert, formerly with the Racine Auto Tire Co., has been appointed branch manager.

$352,216,016 for New Highways

Campaign of 1919 for Betterment of Highways Is the Greatest in History—Amount to Be Expended by Government Would Build Another Panama Canal

The United States is in the midst of the greatest highway building campaign in the history of the world. The aggregate amount to be expended this year on the roads and lanes of the country would build and duplicate another Panama Canal. According to figures collected by the B. F. Goodrich Rubber Company, combined forces of the Federal Government, States and Counties, will spend $352,216,016 in new construction and maintenance of the nation's network of highways. This is the first complete survey of 1919 goods roads expenditures. The amounts to be spent in each State in the Union follow:

Alabama	$1,000,000
Arizona	6,250,000
Arkansas	4,297,398
California	20,000,000
Colorado	4,742,000
Connecticut	8,000,000
Delaware	8,528,000
Florida	8,000,000
Georgia	7,911,000
Idaho	2,100,000
Illinois	2,100,000
Indiana	12,000,000
Iowa	20,498,534
Kansas	8,000,000
Kentucky	3,500,000
Louisiana	2,000,000
Maine	1,630,000
Maryland	6,750,000
Massachusetts	6,000,000
Michigan	15,000,000
Minnesota	11,127,986
Mississippi	7,000,000
Missouri	5,413,079
Montana	6,300,000
Nebraska	2,005,000
Nevada	1,377,499
New Hampshire	1,630,000
New Jersey	6,500,000
New Mexico	4,000,000
New York	2,000,000
North Carolina	5,000,000
North Dakota	1,083,000
Ohio	13,821,500
Oklahoma	3,600,000
Oregon	8,000,000
Pennsylvania	8,780,000
Rhode Island	1,470,000
South Carolina	7,000,000
South Dakota	6,767,376
Tennessee	3,650,996
Texas	60,480,000
Utah	10,092,764
Vermont	1,797,650
Virginia	3,400,000
West Virginia	2,000,000
Wisconsin	3,200,000
Wyoming	6,500,000
Total	$352,216,016

Roughly, Goodrich officials estimate that the expenditures for highway improvement is approximately 3.09 per capita, or, to emphasize this, each man, woman and child in the United States would contribute this much for the building and bettering of roads were taxation on such a basis. Were the expenses apportioned out an average basis each State would pay $7,083,333.

The era of good roads talk has at last been succeeded by the era of good roads construction. Public sentiment is solidly behind extensive highway building programs now, but the enthusiasm must not wane. The millions being spent will be spent in vain unless States undertake to repair roads as quickly as they build.

While the amount available for expenditure this year seems staggering, it will not be enough to make up for deferred war construction, for normally the amount spent on roads in the United States is well above $2,500,000, and the war restriction brakes applied brought road building almost to a stop in many localities.

Three great factors have been largely responsible for this year's amazing highway expenditures. First, the incentive for States to match Federal aid appropriations; second, the passage of enormous bond issues for good roads in many States, and, third, the attention on the urgent need of good roads brought about by the war.

In the New England States—Connecticut, Massachusetts, Rhode Island, Vermont, and New Hampshire have been interesting in closing up short gaps on their main highways, which are otherwise improved for the entire distance. The same condition has been true in New York, where numerous projects are being linked up with an extensive network of roads which are already hard surfaced.

One of the features of this year's work will be the completion of the Dixie Highway, which will be done by the States cooperating with each other and with the Government. For instance, in Illinois the highway will be improved in many spots, one of which is over a distance of 54.5 miles at a cost of $904,700, and the construction will be of concrete and bituminous macadam. At the same time Georgia will be working on the road from Atlanta to Macon, a distance of 72 miles, and a continuation of the Dixie Highway in that State. In Tennessee and Kentucky, projects are under way that will further serve to improve this famous old highway.

Iowa, which spent in the neighborhood of $15,000,000 during both 1917 and 1918, is spending $20,498,534 this year. This State has an ideal road building program. When the State system is completed it will be the equivalent not only of a truck line system converging to the cities, but to a trunk line clear across the State from East to West through every county, and North and South through every county as well. Nowhere else has a system been adopted that treats every county alike or that reaches every district impartially.

Texas leads the nation in highway expenditures this year with $60,480,000 available. Texas also led last year. Within her borders, Texas has 126,000 miles of unimproved roads, as against 22,000 miles of improved highway.

Iowa, California, Michigan, Ohio, Indiana, and Minnesota rank next to Texas in expenditures for road building in the order named. Thus it will be noted that the agricultural States' appropriations exceed those of other regions by many millions.

New Appointment for Slutz

(Special Akron Correspondence.)

F. O. Slutz has been appointed manager railroad sales department of Goodrich, effective July 1, succeeding C. M. Woodruff who resigned to accept a position with Akron board of education.

Mr. Slutz has been with Goodrich eighteen years, having served the company in various positions from factory clerk to that in which his present promotion has placed him.

He is well qualified for his new duties, as he has been connected for the past ten years with the mechanical sales department, paying most of his attention in recent years to railroad sales work exclusively.

New Chemical Concern Opens

The Smith Chemical and Color Company, Incorporated, announce that they have opened offices at 116 Nassau Street, New York City. This Company will carry a general line of standard dry pigment colors, chemicals and fillers covering all the exacting needs of the rubber manufacturing industry.

This new organization is under the direct personal supervision of its President, Mr. Casper Smith, who for many years past was connected with the Katzenbach & Bullock Company as their Western Manager and more recently as their Director of Sales. Mr. Smith is one of the most popular of the younger men in this business; and the business methods so effectively employed by him in the past (and which have won for him the numerous friends in the trade he now possesses) will characterize all movements of the Smith Chemical & Color Company.

CASPER SMITH

Mr. Smith and his associates, who have had many years experience in the chemical and color business, are ready to place themselves at the disposal of Rubber Manufacturers with efficient service and general fair dealing.

New York Rubber Workers Organize

With employees of more than a dozen rubber companies as members and a schedule of contests already under way, the Rubber Industries Athletic League is now a reality. The league was conceived some months ago by a group of employees of rubber companies in and near New York City, who believed that sports would bring about more cordial relations between the representatives of rival companies. After considerable work by a committee on organization the following companies fell into line as members: Ajax, Empire, Pennsylvania, Sterling, Goodyear, Goodrich, Globe, Keystone, Kelly-Springfield, Miller, Federal, Firestone and United States. Most of these companies will have teams to represent them in the league. At the first meeting of the organization the following officers were elected: P. C. Botzenmayer, United States Rubber Co., president; H. A. Demarest, Goodrich Rubber Co., vice-president; J. L. Wood, Ajax Rubber Co., secretary, and B. Greene, Sterling Tire Corp., treasurer.

"The Story of the Tire"

A noteworthy addition to tire literature which will be welcomed by all motorists and others interested in obtaining information concerning how tires are made, is "The Story of the Tire," a booklet now being distributed by The Goodyear Tire & Rubber Company, Akron, Ohio.

This booklet is not designed as an advertising feature but contains the plain story of the various processes in tire manufacture, tracing it from the sap of the forest tree to the finished product, ready to begin its career of service.

The booklet opens with a foreword calling attention to the exalted position occupied today in the world by rubber—how the tiny drops of sap from the rubber tree, carefully collected, go to make up the hundreds of thousands of tons of crude rubber necessary to supply the world's needs, for rubber is now one of civilization's necessities.

A chapter on "Rubber" shows how the discovery of the secret of vulcanization, by Charles Goodyear, brought rubber from the limited field it formerly occupied, to a place in the commercial world second only to that occupied by steel, and how the rubber tire draws attention to the magnitude of the rubber industry.

Then appears a chapter covering the rise of the Goodyear Company from humble beginnings to one of the largest rubber companies in the world, with the important steps in the company's growth. The raising of rubber is described from the gathering and planting of the rubber tree seeds to the tapping of the trees and the gathering of the sap.

The manufacturing process is followed through the various operations of washing, drying, compounding, mixing, spreading and calendering, tracing the rubber up to the point of its utilization in making up the various types of tires; for use on bicycles, motorcycles, airplanes, automobiles and motor trucks.

Inner tubes, the care of tires, the Goodyear cotton plantations and mills, and the development of tires from the first crude types are all given proper mention in respective chapters.

The work is profusely illustrated with timely photographs which help to bring home to the reader its message. It is intended for distribution among students, teachers, educational institutions, libraries and all persons interested in rubber. In fact its publication was inspired primarily by the numerous requests received from all parts of the world for "information about rubber."

New Restaurant for Owen

The Owen Tire and Rubber Company has just opened a new restaurant for employees at the factory at Bedford, Ohio. This restaurant is one of the most complete and up-to-date cafeterias in any rubber plant in the Akron district.

As a unique feature, it is built on the roof of the plant, making its surroundings exceptionally clean and healthful and giving it the most airy situation it is possible to find.

The restaurant supplies the food at cost to the factory and office organization. It seats comfortably one hundred people, and serves meals in relays from 11:20 to 2:30 P. M. in order to accommodate all of the employees. It is recognized by the management of the Owen Tire and Rubber Company that the physical factor is important in the matter of general efficiency. A high standard of physical welfare for the general good is desirable and for this reason the restaurant is kept at the highest level of culinary excellency. The kitchen is equipped in the most hygienic manner, with a chef and a number of assistants.

Among the features of the factory, making for general efficiency from the physical standpoint are shower-baths which the free for the use of all the employees at any time. Everything possible is done at the plant for the comfort and health of all engaged in making Owen products.

Firestone Employees' Legal Department

In line with Firestone policy of doing every thing possible to aid employees, the company has established an Employees Legal Department with Wendell L. Willkie in charge. Here members of Firestone may obtain legal advice, have wills drawn, or any other legal questions handled.

Mr. Willkie, who is head of this department, comes to Firestone from Indiana where for six years he was engaged in the practice of law. A graduate of Indiana University, he holds degrees for both the Art and Law courses of that institution.

A few months after leaving college and but a short time after attaining his majority Mr. Willkie became Prosecuting Attorney of Madison County Indiana. Despite his comparative youth, he was one of the most successful attorneys in the state.

When war with Germany was declared, he entered the first officers training camp at Ft. Benj. Harrison, Indiana and as a lieutenant served with the field artillery of the 84th Division in France. After the armistice he was engaged in courts martial work of considerable importance.

Upon his return from France Mr. Willkie's services were in demand in his home state as a speaker at various gatherings. In this respect his ability is of no mean order.

Last May he entered the Legal Department at Firestone and a short time ago became head of the employees legal department.

Kelly Entertains Detroit Dealers

Frank Hammond, Detroit Branch Manager of the Kelly-Springfield Tire Co., recently pulled off what he called a "Get Together Meeting" of Michigan dealers, entertaining twenty of them at luncheon, a theatre party and an auto ride and to top off with, a dinner at the Hotel Statler.

While the purpose of the gathering was, of course, to discuss matters of mutual interest to Kelly dealers and sales organization, the social aspect was by no means overlooked. "The Great Howard," a well-known ventriloquist from the big time circuit, entertained a very appreciative audience and Ed. McGrath, one of Detroit's most popular cabaret singers, unlimbered a really beautiful voice for their delectation. Frank Hammond himself burst forth into song with a parody on "Smiles" which brought blushes to the cheek of H. Belden Joseph—at least Joseph says it did.

Among those who were present and gave talks were J. V. Mowe, Assistant General Sales Manager, and M. D. Tenney, chief adjuster at the Akron factory. Mr. Hammond also had a number of interesting things to say. Mr. Loomis of the Detroit branch acted as toastmaster.

Goodyear Production Increased

The Goodyear Tire and Rubber Company is now producing tires at the rate of 30,000 a day, including the output of its Canadian subsidiary. It is estimated that the sales of the company for the year ending October 31 next will aggregate $170,000,000, a total of about $39,000,000 more than the sales recorded during the 1917-1918 season. Sales during April of this year alone totaled more than $18,000,000.

Financial authorities figure that, taking the average percentage of net profits to sales over the last six years net profits for the current fiscal year should amount to about $19,000,000 before taxes, or about $80 a share on the $20,466,800 common stock after preferred dividends. The Goodyear Company has been paying a 12 per cent cash dividend annually for the past ten years, and during this period has also distributed stock dividends totaling 320 per cent.

Total assets of the Goodyear Tire & Rubber Company on October 31 last amounted to $93,619,000. After deducting $8,314,920 for current liabilities, $5,336,000 reserves, and $38,783,000 preferred stock, there remained $41,181,280 of assets behind the common stock, equal to more than $200 a share. No allowance was made in these figures for patents, good-will, or trade marks.

Car Fares Raised—Tire Sales Bulge

When street car fares were increased last month in Boston to ten cents the surface lines were collecting 900,000 fares daily, according to newspapers estimates. As a result of the increase it is estimated traffic fell off one-third, to 600,000 fares.

What became of the lost traffic, represented by 300,000 fares daily, is now becoming evident.

The Firestone Tire & Rubber Co. of Akron reports a stimulated demand for bicycle tires already in evidence. The old "bike" has been brought out of the attic and re-tired. Many prospects who had been hesitating over the purchase of an automobile decided to buy, while people of less means turned to the bicycle.

Eventually there will be revealed in Boston and other cities of the country in which car fares are raised, an increased consumption of foot-wear, according to commercial fore-casters. The nickels and dimes of those who have neither bicycles nor automobiles will be spent for shoes.

Kelly Caterpillar Guarantee Raised

A bulletin has been issued by the General Sales Department of the Kelly-Springfield Tire Co., stating that on account of the consistently high mileage performance of the Caterpillar type tires the adjustment basis has been increased to 15,000 miles, which is said to be 50 per cent. more mileage than is guaranteed by the manufacturers of any other truck tire. The adjustment basis of the Liberty type has been increased from 8,000 to 10,000 miles.

New Kelly Depots

To take care of the rapidly increasing business of the Kelly-Springfield Tire Co., on the Coast, a depot has been opened at Bakersfield, Cal., under the management of J. E. Bradley, and another soon will be opened in Portland, Ore., in charge of C. H. Mead, formerly manager of the Stewart Products service station in Portland.

New Rubber Machinery.

Racine Tire Cutting Machine—The Wellman-Seaver-Morgan Calender—An Improved Rubber Foot Pedal for Fords—Stair's Rubber Ear Stopple

Racine Tire Cutting Machine

The Racine Tool and Machine Company, Racine, Wis., have just completed and are now ready to put on the market a machine especially adapted for cutting off from the wheel worn out pressed on truck tires.

This machine is of heavy construction and is designed with the idea of standing up and giving service for the tremendous hard work that it is required to do.

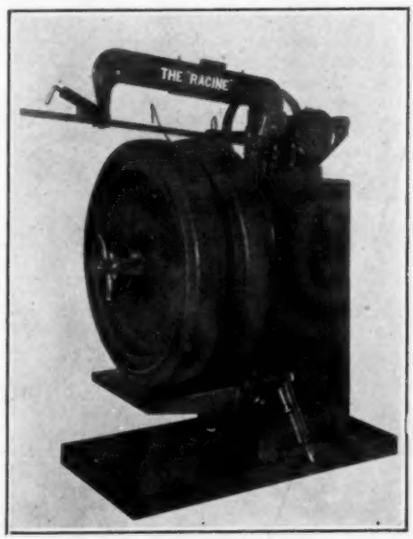
The machine has a movable platform which raises and lowers to a sufficient height to take care of any size or height of truck wheel now in use, and it is also of sufficient capacity for the widest single or dual truck tire.

It is so arranged that when the blade finishes its cut, it is parallel with the felloe of the wheel and automatically stops just before striking the felloe.

The machines have been in test operation in several service stations in the country for several months past and they have been doing most satisfactory work cutting all size tires from the smallest to the largest in both single and dual types.

The machine can cut in approximately ten minutes time a dual tire that is seventeen inches wide.

Almost every day service stations find it impossible to press off some old tires no matter what size press is used. This especially occurs when dealers receive "stickers" or tires on which the rim has been turned by contact in the street with rocks, etc., and also when they receive large dual tires on which tire changes have to be made, for as an average condition it has been found that very few service stations are equipped with presses of sufficient throat opening to handle large size dual tires and in many instances when they try to press off these large dual tires they break down their press.



RACINE TIRE CUTTER

The "Racine" is guaranteed and is positive in every action and will duplicate itself in every cut during the entire life of the machine. All wearing parts are adjustable and accurately machined.

The W-S-M Calender

The Wellman-Seaver-Morgan Company, Cleveland, Ohio, claims that their new calender possesses a number of decided advantages, including: straight line bed plate beneath calender, gear reduction and motor; extreme compactness; gear reduction mounted throughout on roller bearings; splash oiling system in gear reduction and a jackshaft bearing combined with housing of gear reduction.

The calender frame is of cast iron hollow type construction and is heavily ribbed to withstand all loads to which it may be subjected. It is firmly tied across the top with two cast iron separators and at the bottom with a cast iron base plate.

There are three cast iron chilled face rolls finished all over and ground to size. These rolls are hollow cast, bored out to insure uniform thickness, and ground concave and convex to suit their respective work. They are fitted with packing boxes for water connections. Any or all of them can be removed without removing either frame from the base plate.

Each roll is carried on cast iron bearing shells lined with hard bearing bronze. All of the bearing bushings have large oil grooves and are lubricated from large sight feed glass oil cups mounted on the frame.

The calender is equipped with cut herringbone gears throughout, except the wind-up gears, which are cut spur. Should straight spur gears be desired in place of herringbone they can be furnished.

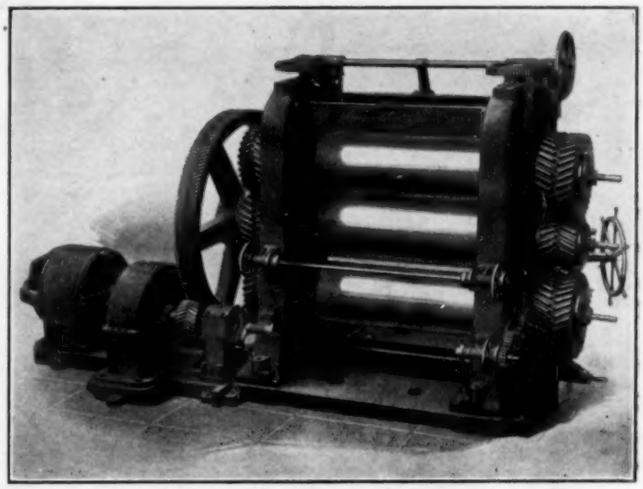
The upper and lower rolls can be adjusted to any desired opening by a hand wheel located on the side of the frame. It consists of a series of bevel and worm gears and screws that act directly on the bearing shells. Either end of either roll can be lowered or raised by engaging or disengaging the clutches which form a part of the adjusting mechanism. A motor for raising or lowering the rolls can be placed on the calender frame.

A friction driven wind-up and friction controlled let-off are mounted on the frame. This wind-up is driven through a train of cut spur gears from the end of the rolls to the adjustable friction clutch on the spindle. All of the gears are protected by cast iron guards. The wind-up can be run in either direction by changing one of the spur gears from one stud to another.

The calender is equipped with an adjustable knife holder with sufficient number of collars to perform all ordinary operations.

A cast iron base plate is furnished under the entire calender, with provision for bolting the extended base plate which carries the gear reduction and motor to the calender base plate with fitted bolts and keys. This arrangement makes the entire calender and drive a self contained unit and permits disassembling and replacing in perfect alignment.

In the gear reduction cut herringbone gears are used. The pinion is of forged high carbon steel and is made in one piece with the shaft. The gear is a steel casting. The shafts are mounted on heavy duty steel mill type roller bearings as shown in the illustration. The gears are encased in a cast iron oil tight housing. The lower half of the housing carries the bearing.



W-S-M CALENDER

An Improved Pedal for Fords

Accidents and collisions due to the foot slipping off automobile control pedals have created a big demand for rubber pads that can be attached to the pedals and eliminate the foot-slipping danger.

An improved device of this nature has been placed on the market by the Hill Pump Valve Company, manufacturer of motor car specialties, Archer Avenue, Chicago, Ill., and is called the "Utility Sure-Grip Pedal." It transforms the small smooth brake and clutch pedals of Ford cars into non-slipping pedals of standard size.

A feature of this new device is a new simple and novel method of attaching, which permits the fitting to be done in a few seconds without drilling or use of tools of any kind. The pedals are equipped with heavy rubber pads, edged with non-rusting metal, giving them a very attractive appearance. They retail at $1.25 a pair.

Stair's Ear Stopples

The Ideal Rubber Company, Los Angeles, Cal., manufacturer of rubber specialties, is producing a soft rubber sanitary ear stopple for soldiers, sailors, nurses, shipbuilders, swimmers and the like. This stopple is known as the Stair's vacuum cup stopple and is specially made to prevent deafness and injury to the ears from noise, heavy concussions, water, and similar causes. All loud noises and concussions are eliminated without destroying all sense of hearing. The stopples, which are made in two sizes and in a variety of colors, also prevent dirt and water from entering the ears.

American Rubber Patents

ISSUED JULY 29, 1919

1,311,163—George E. Gilmore, Cleveland, and Harvey M. Hanes, Wellington, Ohio, assignors by direct and mesne assignments, to The Security Tire & Rubber Company, Cleveland, Ohio. Resilient Wheel-Tire.

1,311,269—Charles W. Gressle, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Vehicle-Wheel Rim.

1,311,309—Bruce Edward Bliss, Wichita, Kan. Two-Part Interlocking Tire.

1,311,340—Daniel B. Freel, Detroit, Mich. Protector for Pneumatic Tires.

1,311,434—Arthur C. Bailey, Vancouver, Wash. Bicycle-Rim.

1,311,463—Louis Rothschild, Philadelphia, Pa. Auto-Tire Carrier.

1,311,468—Richard L. Saunders, Hartford, Conn. Wheel.

1,311,533—Harry C. Schroeder, Berkeley, Calif. Compensating Pump for Pneumatic Vehicle Tires.

1,312,072—John W. Bassham, Columbia, Tenn. Inner tube.

1,312,074—William Gordon Cumming, Montreal, Quebec, Canada. Tire inflating mechanism.

1,312,124—Edward Brice Killen, London, England. Rubber tire.

1,312,144—Sheldon P. Thacher, Weehawken, N. J., assignor to Revere Rubber Company. Process for vulcanizing rubber and product obtained thereby.

1,312,176—Joseph L. Hecht, Davenport, Iowa, assignor to G. Watson French, Nathaniel French, Joseph L. Hecht, and W. H. Stackhouse, Davenport, Iowa, composing the firm of French & Hecht, Davenport, Iowa. Traction wheel.

1,312,344—Charles A. Nethercutt, Burnetts Creek, Ind. Tire guard.

1,312,364—Clarence A. Shalder, Waupun, Wis. Vulcanizing apparatus.

1,312,383—Marc Birkigt, Bois-Colombes, France. Motor vehicle.

1,312,729—Henry Heller, Winona, Minn. Anti-skid device.

1,312,750—Alfred E. Stacey, Jr., Chicago, Ill., assignor to Carrier Engineering Corporation, New York, N. Y. Method of Drying material.

1,312,829—Arthur Raymond Brokenshire, Fenelon Falls, Ontario, Canada, assignor of one-half to Fred J. Goodman, Fenelon Falls, Ontario, Canada. Tire carrier for motor cars.

1,312,924—John Rowe, Casey, Iowa. Mud shoe for automobiles.

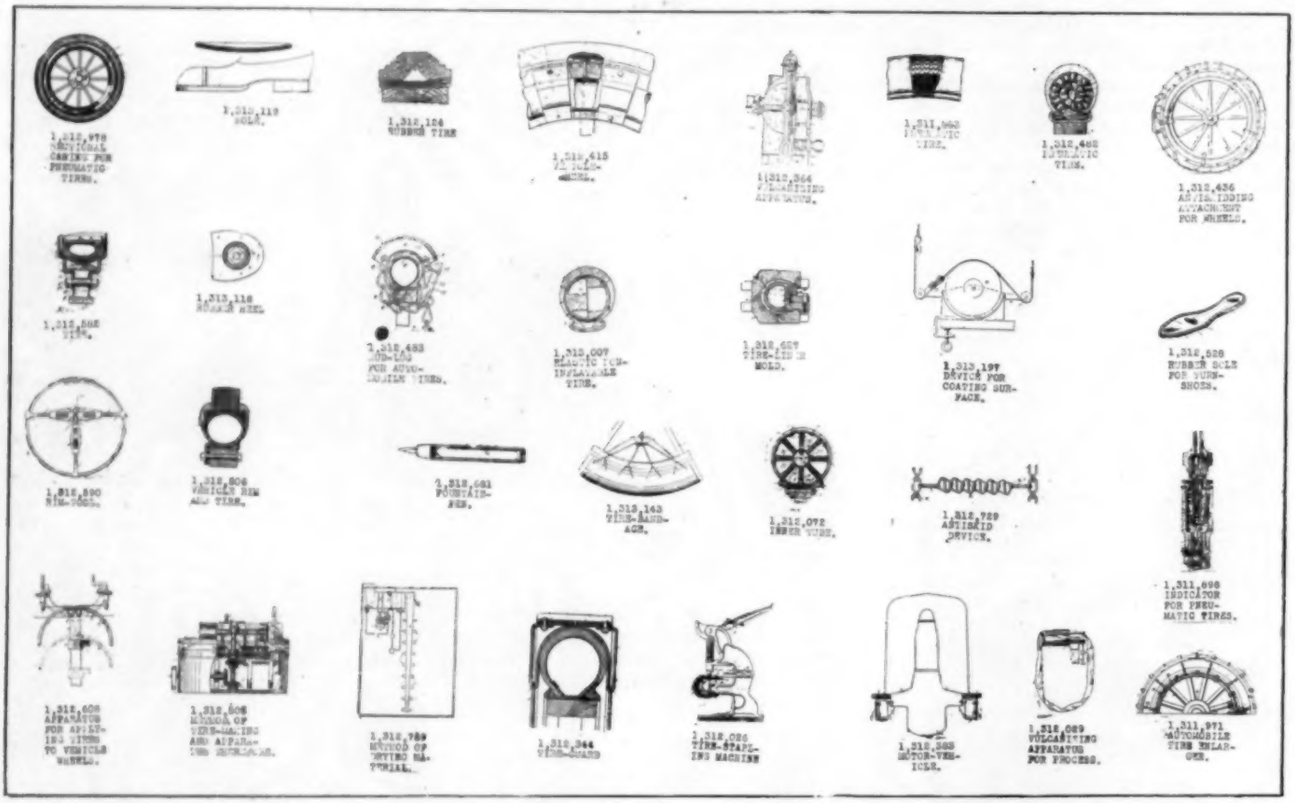
1,312,978—Charles H. Gunn, Emeryville, Cal. Spectional casing for pneumatic tires.

1,313,007—Cary A. Morrison, Delaware, Ohio. Elastic non-inflatable tire.

1,313,026—John William Smith, Chicago, Ill. Detachable heel.

1,313,056—Oswald H. Blackwood, Rolla, Mo., and Fred Pearson, Chicago, Ill. Fountain pen.

1,313,118—Agostino Santacroce, Elyria, Ohio, assignor of three-tenths to John Grumbos and three-tenths to Spyro Sadaris, Elyria, Ohio. Rubber heel.



1,311,554—Isaac W. Glazner, Brooklyn, N. Y. Antiskid Device for Vehicle Wheels.

1,311,560—Edgar T. Horsey, Cleveland, Ohio. Vulcanizer.

1,311,578—Herbert A. Stilson, Dubuque, Iowa, assignor to Henry F. Trenk, Dubuque, Iowa. Device for Supporting Wheel-Tires.

1,311,613—Melvin Le Roy Munger, Pittsburgh, Pa., assignor to Everett B. Sawyer, Lincoln, Nebr. Tire-Vulcanizer.

1,311,677—Sylvester A. Brisbois, Detroit, Mich. Vehicle-Wheel Tire.

1,311,720—Leonard T. Sintzel, Los Angeles, Calif. Detachable Automobile-Tire Tread.

1,311,750—Anna A. Brashear, Santa Barbara, Calif. Tire.

1,311,806—Henry B. Conts, Veedersburg, Ind. Section Pneumatic Tire.

1,311,842—Charles F. Rubsam, Brooklyn, N. Y. Vehicle-Wheel.

1,311,856—Peter De Mattia and Barthold De Mattia, Clifton, N. J. Rubber-Shoe-Sole-Making apparatus.

1,311,857—Charles B. Doolin, San Antonio, Tex. Laminated Fabric for Tire-Casings.

ISSUED AUGUST 5, 1919.

1,311,883—Judson C. Eubank, Chicago, Ill. Pneumatic tire.

1,311,898—John L. Jackson, River Forest, Ill. Indicator for pneumatic tires.

1,311,971—John Elmer Johnson, Ruth, Nev. Automobile tire enlarger.

1,311,993—Etienne Planche Flint, Mich. Tire carrier.

1,312,026—Arno A. Ewald, Oakfield, Wis. Tire stapling machine.

1,312,029—Edward Fetter, Baltimore, Md. Vulcanizing apparatus and process.

1,312,415—Daniel Moriarty, Oakland, Cal. Vehicle wheel.

1,312,436—Martha M. Duff, Arnold, Pa. Anti-skidding attachment for wheels.

1,312,482—Harry G. Imhoff, Waterloo, Iowa. Pneumatic tire.

1,312,483—Halmer C. Kittelson, Minneapolis, Minn., assignor to Pressed Steel Automobile Lug Company, Ind., Minneapolis, Minn. Mud lug for automobile tires.

1,312,505—Ernest Hopkinson, New York, N. Y. Method of tire making and apparatus therefore.

1,312,506—Henry M. Fisk, Chicago, Ill. Vehicle rim and tire.

ISSUED AUGUST 12, 1919.

1,312,528—George Ferguson, Wollaston, Mass., assignor, by mesne assignments, to United Shoe Machinery Corporation, Paterson, N. J. Rubber sole for turn shoes.

1,312,535—Charles W. Gressle, Cleveland, Ohio, assignor, by mesne assignments, to The Standard Parts Company, Cleveland, Ohio. Transversely split demountable rim.

1,312,582—Frank Schneible, New York, N. Y. Tire.

1,312,590—Alfred B. Smith, Topeka, Kan. Rim tool.

1,312,608—Gustav Boesch, Danbury, Conn. Apparatus for applying tires to vehicle wheels.

1,312,627—John H. Grube, Los Angeles, Cal., assignor to Airsafe Inner Tire Company, Los Angeles, Cal. Tire liner mold.

1,312,681—William L. Chapman, Brooklyn, N. Y. Fountain pen.

1,313,119—Agostino Santacroce, Elyria, Ohio, assignor of three-tenths to Spyro Sadaris, Elyria, Ohio. Sole.

1,313,143—Simon Weiser, Houston, Tex. Tire bandage.

1,313,197—Arthur W. McCurdy, Victoria, British Columbia, Canada. Device for coating surface.

Rubber Activities

(Special Akron Correspondence)

The Cascade Tire & Rubber company of Ravenna has placed orders in Akron for machinery for its new plant. The first factory unit will cost $225,000, it is announced.

The Mason Tire & Rubber company of Kent has let a contract for the erection of a factory addition costing $190,000.

The Goodyear company in California has taken out building permits totalling $3,500,000 for the first units of its new plant at Los Angeles.

The Chillicothe (O.) Tire & Rubber company will open its new plant Aug. 15 and will start with a production of 600 tires a day.

The Goodyear has applied for a building permit in Akron to construct an additional warehouse at a cost of $20,000.

MARKETS

Manufactured Rubber Goods

NEW YORK, August 21, 1919.

A continual widening in the scope of activities in the markets for manufactured rubber goods is noted, and conditions are rapidly readjusting themselves to a more normal basis. The tire industry continues in the strongest position of all the allied trades, and every tire company in the country is reputed to be assured of enough business to keep it operating to capacity for some time to come. Demand for tires is strong in the United States and abroad also, and a strong export business is expected to be worked up within the near future.

At the present time, the unfavorable position of the foreign exchange markets is operating adversely in all branches of foreign trade, and for the moment, export inquiries in the rubber market are less numerous than for some time past. It is expected that the situation will be clarified within the near future, however, and a strong boom in export trading is looked for. Germany, Austria, and other European nations are at present busy in endeavoring to arrange some credit basis to finance purchases in the American markets, and it is expected that the movement of American rubber goods abroad will be begun immediately a basis of settlement is decided upon. German agents are already looking around the American market for supplies, and the rubber trade will come in for its full share of business as rubber, and rubber goods were extremely scarce in Germany during the last two years of the war.

DRUGGISTS' SUNDRIES

Domestic trading continues quiet along well-established routine lines. Druggists are in no ways inclined to anticipate their requirements and are buying only in a hand to mouth manner, lest some price reductions should catch them with large stocks on hand.

Export demand, as in most other lines, is the mainstay of the market at the present time. England is credited with making some fairly heavy purchases, and Germany, France, Belgium, and the Scandinavian countries are also heavy buyers in the American markets. Latin-American demand is active, and there is some business being done with Mexico. Exporters to the latter country, however, will soon have to meet determined German competition.

MECHANICAL GOODS

The market for mechanicals is slowly working itself back to normal, but business is still far below the volume that producers would like to see it at. Domestic business is picking up somewhat, but is still slow. The railroads have not yet entered the market for any more equipment, and the trade is watching with interest the day-to-day developments in the situation. From all reports, it appears that when the railroads are finally returned to private ownership (if returned they are), they will be devoid of the necessary rubber equipment, and an immediate demand for coupling and other supplies is expected to immediately ensue.

Interest in rubber belting is not active at the moment, and producers are reported to be shading prices to obtain business. Export business is rather brisk, European countries buying belting, hose and other rubber products to replenish their supplies depleted during the war. South America is also a buyer in the present market.

MISCELLANEOUS PRODUCTS

A good demand for rubbers is expected this fall, when some 2,000,000 men who have returned to civil life will be in the market for rubbers and overshoes. The season for raincoats is not expected to be an especially active one, inasmuch as nearly every man discharged from the service takes a raincoat or slicker with him. In addition to this, sales of army raincoats to the public have been staged, and many consumers have supplied their wants in this manner. Export demand is expected to make up this deficiency in domestic buying, however.

Inquiry for rubber heels and soles is reported to have taken a bound upward during the past few weeks, and with leather prices soaring to the skies, interest in these products is becoming more pronounced. Rubber footwear this summer has been more in vogue than ever before, and by next year the volume of business in this product is expected to be even heavier than during the past season.

Orders for jar rings this year have not been up to the mark of past seasons, due principally to the shortage of sugar. Housewives have not been able to put up as many preserves as they would have wished to for this reason. Other small rubber articles, such as washers, rubber rollers and kindred products are meeting with a good call.

RECLAIMED RUBBER

The easy position of the crude rubber market is keeping the reclaimed rubber market in a rather quiet position, and reclaimers state that their business is merely routine in character at the present time. They are holding out hopes for a revival in demand in the fall, when, it is expected, manufacturers of rubber footwear will come into the market for supplies.

AUTOMOBILE TIRES

Consumption of tires, both pneumatic and solid, appears to be increasing steadily and the larger manufacturers are constantly increasing their production to be in a position to handle the increased business offered them. The tire industry was never in a better condition, many factors declare, and with the producers it is not a question of scouting around for orders, but rather the problem of keeping production up to the scratch. Automobile manufacturers continue to be the largest purchasers of pneumatic tires, the demand from motorists being below normal for this time of the year. The infusion of new capital and more dealers in the tire distributing field is also cutting down the business of some of the old established dealers. No important reductions in prices have been heard of, but the various companies are keeping a wary eye on each other to prevent their competitors from "slipping one over" in the shape of some sudden reduction of a leading make.

Announcement has been made of new prices on pneumatic tires by the Bergougnan Rubber Corporation, Trenton, N. J. The new list went into effect on August 11 and is as follows:

Sizes in	Casings			Tubes
Inches	Plain	Non-Skid	Cord	Red
28x3	$16.75	$18.40	....	$3.40
30x3	17.60	19.35	....	3.55
30x3½	21.75	23.90	$33.00	4.05
32x3½	25.40	27.95	40.00	4.35
34x3½	28.85	31.75	....	4.75
31x4	31.75	34.90	....	5.25
32x4	34.00	37.40	49.60	5.45
33x4	34.80	38.30	51.30	5.65
34x4	36.15	39.75	53.00	5.85
35x4	37.90	41.70	....	6.05
36x4	39.65	43.60	....	6.25
32x4½	40.95	45.05	58.40	6.80
33x4½	41.75	45.90	60.00	7.00
34x4½	43.60	47.95	61.60	7.20
35x4½	46.15	50.75	63.20	7.40
36x4½	48.90	53.80	64.80	7.60
37x4½	51.80	57.00	....	7.85
33x5	53.25	58.60	73.90	8.20
34x5	55.00	60.50	....	8.35
35x5	56.80	62.50	77.75	8.50
36x5	58.80	64.70	....	8.70
37x5	60.45	66.50	81.00	8.95
37x5½	73.80	81.20	....	10.00
38x5½	79.70	87.75	....	10.25
36x6	....	....	112.00	16.50

Cottons, Yarns and Fabrics

NEW YORK, August 21, 1919.

While the market has seen an active two weeks, trading has been unsettled during the past fortnight, with heavy hedge selling by local and Southern trade interests reported. The extreme weakness of the foreign exchange markets, with French, British, and Italian rates all declining rapidly to new low records, has been the main factor in the unsettled state of the market, as the position of the exchange market thus makes buying conditions here by European and Continental interests all the more expensive and difficult to finance.

While prices have eased off considerable, the declines have not yet offset the declines in exchange rates, and thus foreign buying has been kept down to a minimum. As showing the small sales made,

the total sales of spot in Houston last week were only 5,569 bales, while only 5,302 bales were sold in Galveston. This is an unusually small turnover for this season of the year. Export clearances last week, largely put through on old business contracted some time ago, were 87,928 bales, of which 57,619 bales went to Continental Europe, 22,052 bales to Great Britain, 2,871 bales to France, and 5,440 bales to Japan. Total exports from the opening of the present statistical year on August 263,000 bales, against 150,000 at this time last year.

Continued good weather over the Western half of the cotton belt has been reported for some time, especially in Oklahoma and Texas, and this good weather news has offset the discouraging reports of rain being received from other growing districts.

The unfavorable condition of the market, from a speculative standpoint, is bringing out a good many contracts held by speculators, and with the market dragging here and in Southern markets, trade interests are picking up a good deal of cotton dropped by speculators who have become tired of waiting for an upturn which will yield them a handsome profit.

SEA ISLAND COTTON

Reports from the Sea Island belt do not tell of much activity among the growers, and only a very small part of the normal crop will be put into the ground this year. Already many of the growers are reported to have turned to the growing of foodstuffs, putting all thoughts of cotton-growing aside, for the time being at least. The inroads of the boll weevil during the past few years have made cotton growing an unprofitable business for the majority of the growers, and when they were unable to obtain prices considered fair by them for last season's crop, they decided to thrown up the sponge. Present interest in the trade centers in the endeavors to grow Sea Island, or substitute cottons, elsewhere.

EGYPTIAN COTTON

Holdings of old crop Egyptian cotton are well sold up, Alexandria reports indicate, and the entire holdings of the old crop are expected to be disposed of shortly. Late indications point to a heavy yield of cotton in the coming crop, the only uncertainty being the supply of water. Much of the surplus supplies held for release into the river this summer, at low water time, were used up to keep the river high enough to permit of the movement of British army boats, and some growers fear that there will not be enough to release to irrigate their cotton lands this fall.

FABRICS

Although firmness has ruled in all branches of the cotton market, trading has not been particularly active on any lines. Supplies are not large, and the increasing demands of labor are resulting in forcing prices up on many items. Consumers are booking very little contract business with the mills, it is said, as the latter are too uncertain of conditions to commit themselves to any quantities or prices this early in the season.

TIRE FABRICS

A continued good demand for tire fabrics is reported, and with many tire concerns running day and night to keep pace with their orders, dealers declare that the outlook is distinctly a favorable one in most respects. The market is generally firmly held, with Egyptian fabrics reported rather hard to obtain. Some spinners of tire yarns are reported using the Egyptian cotton grown in the Southwest, where the industry has been started during the past few years, and is now a flourishing one.

HOSE AND BELTING FABRICS

There is a fair demand for mechanicals reported, and the market is showing a fair tone. Buying is now as heavy as dealers would like to see it, however, due largely to the quiet demand for finished mechanical goods, such as belting and rubber specialties. Prices on the various materials are generally firmly maintained by dealers.

DRILLS, SHEETINGS AND OSNABURGS

Although the market has ben generally quiet, prices are fully maintained, and commission men and mill men are of the opinion that prices have touched rock bottom. The falling off in demand is attributated partly to the fear of Government investigation into the market, and consequent price regulation, and all consumers are keeping out of the market except to cover their bare consuming needs. On the other hand, commission and mill men refuse to accept any contracts unless the prices bid are higher than those now prevailing on the spot. Many second hands, frightened at the talk of investigations into profiteering, are unloading at a few points below the market.

BURLAPS

Trading in the market for burlaps has been rather quiet during the past fortnight, due to a divergence in the views held by consumers and importers. There are some jobbers reported to be selling at a few points below the established market, but the leading importers are standing pat on their present prices, those quoted below, and prefer to go without business rather than cut prices.

Replacement costs in the present market are as high, if not higher, than the present market price of the material, they declare, and reports received from the Calcutta market from day to day tell of further advances in the market there. Transportation difficulties in India are hampering production to a certain extent.

TIRE FABRICS

17¼-ounce Sea Island, combed,	sq. yd.	1.40@1.55
17¼-ounce Egyptian, combed		1.20@1.30
17¼-ounce Egyptian, carded		Nominal
17¼-ounce Peelers, carded		.85@ .90
17¼-ounce Peelers, combed		1.05@1.15

DUCKS

Single Filling (pound basis)	lb.	Nominal
Double Filling (pound basis)		Nominal

DRILLS

37-inch	2.35-yard	yd.	.29 @ .30
37-inch	2.75-yard		.27½ @ .28½
37-inch	3.00-yard		.25 @ .....
37-inch	3.25-yard		.24 @ .....
37-inch	3.50-yard		.22½ @ .23
37-inch	3.95-yard		.20 @ .21
37-inch	2.00-yard Southern		@ .....
37-inch	2.00-yard Northern		@ .....
40-inch	2.40-yard Southern		@ .....
40-inch	2.40-yard Northern		@ .....
52-inch	1.90-yard Southern		@ .....
52-inch	1.90-yard Northern		@ .....

SHEETINGS

40-inch	2.35-yard	yd.	@ .....
40-inch	2.50-yard		.28 @ .....
40-inch	2.85-yard		.25½ @ .....
40-inch	3.00-yard		.25½ @ .....
40-inch	3.25-yard		.23 @ .23½
40-inch	3.75-yard		.19 @ .....
40-inch	3.60-yard		.20½ @ .....
40-inch	4.25-yard		.17¼ @ .17½

Note.—In view of the unsettled conditions prevailing in the market at the present time, the prices quoted above are more or less nominal, and are not guaranteed.

BURLAPS
(Carload lots)

			Per Yard
7	-ounce	40-inch	Nominal
7½	-ounce	40-inch	Nominal
7½	-ounce	45-inch	Nominal
8	-ounce	36-inch	@ .....
8	-ounce	40-inch	15.50@ 15.75
8½	-ounce	40-inch	@ .....
10	-ounce	36-inch	@ .....
10	-ounce	40-inch	17.50@ .....
10	-ounce	45-inch	Nominal
10½	-ounce	40-inch	18.00@ .....

Chemicals and Compounding Materials

NEW YORK, August 21, 1919.

Consumption of many items in the list of chemicals and compounding materials is getting ahead of production, and the market is in a strong position as a result. Demand is reported as uniformly good in all quarters, and buying is steadily increasing for both domestic and foreign account. The business booked by various concerns so far this month, shows a considerable gain over the volume thus far in the past month, and the market is pronounced by leading interests to be in an unusually sound and healthy condition. The only drawback to the situation is the condition of the labor market, and thus far no serious disturbances have menaced the industry.

The question of keeping up with their business is one that is bothering many producers and manufacturers of chemicals, and plant operations are being speeded up throughout the country. While there are a few price declines to be noted this month, these revisions are not general, the market being usually in a sound position. Most of the present price reductions are the results of the improvements in the raw materials markets, these raw materials having become more easy to get. Where prices have been forced up during the war by exorbitant freight charges, it is only natural to expect some reductions now that ocean freight rates have been reduced.

Producers of leads, dry colors, lithopone, and other chemicals and compounding materials used in the paint trade have had a chance to catch up on their orders by the painters' strike in New York. This strike, curtailing purchases of paints, allows the producers of the compounding materials to take better care of their business with the automobile and tire trades.

EXPORTS

This phase of the business is becoming increasingly important in the market, and the American chemical business continues to expand abroad. Demand from Great Britain, France, Belgium, and other countries shows no signs of abatement, and South and Central America also continue heavy buyers of the American product. American producers are showing less fear of a German invasion of the American markets, and hope is even expressed that America may retain its foreign business developed during the war. Mexico, however, is expected to revert to trading with Germany, negotiations looking toward the resumption of trading in chemicals with Germany having already been started. Other foreign markets, however, are expected to show preference for the American products when prices compare favorably with those named by the Germans. American producers are under no delusions in this respect, and do not expect the war-engendered hate of the Huns to continue in business, where the almighty dollar generally rules supreme and where sentiment is conspicuous by its absence.

BENZOL

Export inquiries for benzol continue at a fair rate, and there is a good volume of business being put through with Continental Europe on the basis of 22 to 27 cents per gallon. Great Britain, it is understood, has disposed of her surplus holdings, which for a long time cut down the demand for American benzol. Domestic demand is also fair at the present time.

LITHARGE

There is a steady undercurrent of feeling featuring the market for litharge, and the price remains unchanged on the basis of 9¾ to 10½ cents per pound. Consumers are buying in larger volume, although by no means inclined to anticipate their requirements.

LITHOPONE

Lithopone producers are not able to take on much more business, being sold up for a considerable period. Most of the business for this season has already been placed, and the only job of the producers is to speed up production to fulfill their contract obligations. Many producers are entirely out of the market, and are not offering at any price, while the few producers still offering are asking 7 cents per pound for their product. Producers are planning to greatly enlarge their facilities next year, to care for the increased demand for lithopone.

WHITING

Steadiness features trading in whiting, and prices are firmly held on the basis of $1.75 to $2.50 for the English cliffstone. American paris white is unchanged at $1.50 and $1.75, and commercial whiting is held at $1.15 to $1.20 per cwt.

ORANGE MINERAL

No change in this market has been noted, and dealers report a steady consuming demand. No price changes are anticipated until prices on leads and other pigments are revised. Dealers are now quoting on the basis of 13¼ to 13¾ cents per pound.

BARYTES

Lithopone manufacturers are in the barytes market for all of the supplies they can obtain, while other consumers of crude barytes are also heavy purchasers. Producers are increasing their output, both to take care of their increased business, and to preclude the possibility of any shortage in supplies furnishing an excuse for the revival of the German industry in this country. There have been no barytes imported since 1915, and domestic producers plan to continue control of the American market if it is possible.

Reports from the West state that the recent freight embargo tied the market up to a considerable degree. Buyers of the crude are reported to be placing orders for heavy quantities. The reason given for this unusually heavy buying is the fear of a curtailing in production or shipping by some sudden strike, and consumers are planning to establish reserve supplies, foreseeing such contingencies. Prices remain unchanged, despite increased cost of production.

GLUES

Consuming demand for glues has taken a sharp bound upward during the past few months, and producers are assured of enough business to take care of their production for some time to come. Prices continue unchanged, with demand for the cheaper grades predominating, although the top grades are also selling at a fair rate. The use of glues by tire manufacturing companies is said to be constantly increasing.

WAXES

The market shows a strong tone, with business reported as good. Beeswax dealers are doing a heavy volume of business, and prices hold firm. The carnauba market is reported firmer in Brazil, but the decline in foreign exchange has offset the market advances. Stocks of carnauba waxes are fair, and the market is strongly held. The market for Japan wax holds steady.

DRY COLORS

Trading in dry colors has been quiet along well-established routine lines during the past fortnight, with prices generally holding steady. Producers are looking for an increased demand beginning next month. The rubber industry continues a heavy buyer of blacks, and this branch of the market is firmly held. Blues are also strongly held under a fair consuming demand. The market for browns was quiet, with chief inquiry for Italian sienna. Greens were quiet, with prices unchanged. Reds were quiet, with demand for American predominating, and little foreign coming into the market. Chrome yellow is the chief seller in the market for yellows, and prices continue strongly held. Colors in oil are strongly held.

OILS

The market for oils is generally strongly held. Linseed oil continues strong, and leading producers are able to supply their customers with only small allotments on their contracts. The market for future shipment oil continues unchanged, and producers expect to be able to take care of more business when the new seed crops reach the crushers. Corn oil both the refined and crude grades, continues strongly held. The market for rosin oils and turpentine has shown a little decline due to replenishment of spot holdings.

Prices Current for Chemicals, Fillers, Colors, etc.

Acetone, carlots	lb.	.13½ @	.14
Smaller lots	lb.	.15 @	.16
Accelerator, in drums	lb.	.85 @	1.00
Acids, Acetic, 56%	cwt.	6.00 @	6.50
Carbolic, C. P.	lb.	.13 @	.15
Muriatic, 20 deg.	lb.	1.50 @	1.60
Muriatic, 22 deg.	cwt.	1.90 @	2.15
Nitric, 42 deg.	cwt.	7.00 @	8.00
Nitric, 40 deg.	cwt.	6.75 @	7.50
Sulphuric, 60 deg.	ton	12.00 @	15.00
Tartaric, crystals	lb.	.86½ @	—
Aluminum Flake	ton	29.00 @	31.00
Aniline oil, bulk basis. Contract		.25½ @	.27
Imported		Nominal	
Antimony, metal spot	lb.	.09 @	—
Oxide	lb.	.09 @	.11
Sulphuret, red	lb.	.20 @	.21
Sulphuret, golden	lb.	.21 @	.22
Sulphuret, crimson	lb.	.45 @	.50
Asbestos	ton	35.00 @	45.00
Asphaltum, Egyptian	lb.	.16 @	.20
Domestic	ton	22.00 @	30.00
Barium sulphate, technical	lb.	.04½ @	.05
Sulphide	lb.	07¼ @	.07½
Barytes, prime white imported	ton	Nominal	
white, domestic	lb.	.30 @	.31
off color, domestic	lb.	.21 @	.24
Southern, f.o.b. mills		21.00 @	—
Western, f.o.b. mills		21.50 @	—
Benzol, pure, bulk	gal.	.22 @	.27
Beta-naphtol, sublimed	lb.	.55 @	.65
unsublimed	lb.	.50 @	.62
Blacks, Drop	lb.	.05½ @	.15
Ivory	lb.	.16 @	.30
Carbon, gas, cases	lb.	.12 @	.25
Lampblack, R. M.	lb.	.15 @	.45
Mineral blacks	ton	35.00 @	45.00
Blues, Prussian	lb.	.65 @	.75
Soluble	lb.	.68 @	.78
Ultramarine	lb.	.12 @	.40
Browns, Umber, Turkey, burnt, powdered	lb.	.05 @	.06½
American, burnt	lb.	.03½ @	.04
Cadmium sulphide, yellow	lb.	2.00 @	2.25
Carbon, bisulphide, bulk	lb.	.05½ @	.06½
tetrachloride drums	lb.	.10 @	.12
Caustic Soda, 76@78%	cwt.	3.25 @	3.50
Chalk, precipitated, extra light	lb.	.05½ @	.06½
light	lb.	.05 @	.06
heavy	lb.	.05½ @	.06
China clay, domestic	ton	8.50 @	20.00
imported	ton	19.00 @	23.50
Fossil flour	lb.	.03¾ @	.05
Gilsonite	ton	47.50 @	60.00
Glue, extra white	lb.	.35 @	.40
medium	lb.	.30 @	.35
low grade		.20 @	.25
foot stock		.13 @	.18
brown foots		.12 @	.16
common bone		.11 @	.15
Glycerine, C. P. (drums)	lb.	.20 @	.22
cans		.23 @	.24
second hands		.20 @	.22
Graphite, flake (bbl.)	lb.	.14 @	.25
powdered (bbl.)	lb.	.05 @	.10
Green, chrome, R. M.	lb.	.35 @	.40
Ground glass (fine)	lb.	.03½ @	.04
Hexamethylene	lb.	.90 @	1.00
Infusorial earth, powd'd.	lb.	.02 @	.035
bolted	lb.	.035 @	—
Iron oxide, red, reduced grades	lb.	.07 @	.08
red, pure, bright	lb.	.15 @	.20
Lead, red, dry (casks)	lb.	.10¼ @	.10½
sublimed	lb.	.09¼ @	.09¾
white, basic carb.	lb.	.09 @	.09½
white, basic sulp.	lb.	.08¼ @	.08½
Lime flour	lb.	.01¾ @	.02
Litharge (casks)	lb.	.09¾ @	.10½
English	lb.	*.12 @	.13
Lithopone, domestic, bbls.	lb.	.07 @	—
in bags	lb.	.06¾ @	—
Magnesia, carbonate	lb.	.12½ @	.13½
calcined, heavy	lb.	.12 @	.14
calcined light	lb.	.65 @	.75
Magnesite, calcined, pwd.	ton	50.00 @	65.00
Mica, powdered	lb.	.04¾ @	.05
Mineral rubber (asphaltum base)	ton	80.00 @	115.00
Naphtha, motor gasoline, (steel bbls.)	gal.	.23½ @	—
68 @ 70 degrees (steel bbls.)	gal.	.30½ @	—
70 @ 72 degrees (steel bbls.)	gal.	.31½ @	—
73 @ 76 degrees (steel bbls.)	gal.	.33½ @	—
machine (wood bbls.)	gal.	.36½ @	—
Oil corn, crude	lb.	.28 @	—
corn, refined	lb.	.28 @	.29
linseed (bbls.) spot		2.25 @	—
linseed (bbls.) Nov.-Dec.		2.15 @	—
Jan.-June		1.98 @	—
in carloads		2.22 @	—
tank cars		2.17 @	—
Oil palm, Lagos	lb.	.18½ @	—
Niger		.16 @	.16¼
pine, yellow	gal.	.87 @	—
rapeseed, refined	gal.	1.50 @	1.55
rapeseed, blown	gal.	1.60 @	1.65
rosin, first rectified.	gal.	.88 @	—
second run		.92 @	—
tar (commercial)	gal.	.40 @	.41
Orange mineral, American.	lb.	.13¼ @	.14¼
imported	lb.	.15 @	.20
Paraphenylenediamine	lb.	2.75 @	3.25
Petrolatum, bbls., amber.	lb.	.07½ @	.08
pale yellow	lb.	.06 @	.07
Pine tar kiln	bbl.	12.00 @	12.50
Pitch	bbl.	8.00 @	8.25
Plaster of paris	bbl.	2.00 @	3.00
Red Tuscan	lb.	.22 @	.30
Indian (reduced)	lb.	.14 @	.16
Standard	lb.	.12 @	.16
Rosin (common to good)—280 lbs.	bbl.	16.60 @	—
Rotten stone, powdered	lb.	.02½ @	.04½
Rubber, substitute, black	lb.	.13 @	.17
white	lb.	.15 @	.24
brown		.20 @	.25
Shellac, fine orange	lb.	— @	—
T. N.	lb.	1.25 @	—
Bleached ordinary	lb.	— @	—
Bleached bonedry	lb.	1.30 @	1.35
Silex (silica)	ton	22.00 @	40.00
Soapstone, powdered	ton	12.00 @	17.50
Starch, corn, powd.	cwt.	6.02 @	6.49
pearl		5.87 @	6.34
Jap. potato	lb.	.09¾ @	.09⅞
Sulphur, crude	ton	*50.00 @	—
100 pounds		3.20 @	4.25
roll		2.70 @	3.15
commercial superfine		2.50 @	—
Talc, American	ton	20.00 @	40.00
French	ton	*30.00 @	35.00
Toluol, pure, in drums.	gal.	.25 @	.30
commercial		.22 @	.27
Tripolite earth	lb.	.01½ @	—
Turpentine, pure gum—spirits	gal.	1.65 @	—
wood	gal.	1.50 @	—
Venice, artificial	gal.	.14 @	.15
true		4.50 @	—
Vermilion, English	lb.	1.65 @	—
American		.25 @	.30
Wax, beeswax, crude yel.	lb.	.44 @	.45
refined		.48 @	.49
Baybury		.48 @	.55
ceresin, white	lb.	.16 @	.18
yellow		.15 @	.17

carnauba, No. 3....lb.	.57	@	.58
Montan, crude ....lb.	.35	@	.36
ozokerite, black.....lb.	*.60	@	.61
ozokerite, green.....lb.	Nominal		
candelilla	.32	@	.33
Wax, Paraffin, refined, 118/120 M. P. (bbls.) .lb.	.07½	@	—
Paraffin, 125/127 M. P. .....lb.	.08¼	@	—
Wax, Paraffin, 128/130 M. P. .....lb.	.08⅞	@	—
133/135 M. P.....lb.	.10	@	.10½
Crude, 120/122M.P.lb.	.07¾	@	.08
124/126 M.P.....lb.	.10½	@	.10¾
Whiting, commercial...cwt.	1.15	@	1.20
Alba .....cwt.	1.25	@	—
Paris, white, American .....cwt.	1.50	@	—
English cliffstone.cwt.	1.75	@	2.50
Yellow chrome C. P....lb.	.23	@	—
†Zinc oxide, States Brand.	.10	@	—
horsehead brand....lb.	†.10	@	.10¼
Zinc—selected .....lb.	†.09½	@	—
"XX red".....lb.	†.09	@	—
French process, green seal .....lb.	†.10½	@	—
red seal .....lb.	.09½	@	—
white seal.....lb.	†.11½	@	—
substitutes .....ton	35.00	@	40.00
sulphate, pure.....lb.	*.04	@	.04¼

* Nominal. † Contract prices.

Scrap Rubber

NEW YORK, August 21, 1919.

The latter half of the month has shown no improvement in the demand for scrap rubber, and trading continues quiet along routine lines. Dealers are unable to get consumers to show much interest in scrap in view of the cheapness of the raw material.

Export inquiries continue just fair, dealers say, and thus far the foreign demand has not shown any appreciable increase. Great Britain and Germany, as well as other European countries, are reported shopping around the market for tire tubes, but thus far little actual business along these lines has been booked.

	Cents per Pound.		
Boots and shoes.....	7.00	@	7.75
Arctics, trimmed	5.50	@	6.00
Arctics, untrimmed	4.25	@	4.75
Tires—Automobile	3.50	@	4.00
Bicycles, pneumatic	2.25	@	3.00
Mixed hose	1.00	@	1.50
Air brake	2.50	@	2.75
Inner tubes, No. 1.....	18.75	@	20.00
Inner tubes, No. 2.....	9.00	@	10.00
Red tubes	9.50	@	10.00

Crude Rubber

NEW YORK, August 21, 1919.

Crude rubber has developed a firmer tone since our last report, and prices have been marked up on some varieties. Manufacturers who have been looking for a weaker market have been disappointed, as importers and dealers are firmly maintaining the market at its present level. The price advance has stimulated buying to a considerable degree, and there is a good demand for first latex crepe at 43 and 44 cents per pound, and smoked sheets rubber were firmly held at 42½ to 43 cents per pound.

Some dealers have advanced their quotations 1 cent over the market on all grades, and indications point to a much higher level of prices within the next few weeks. Future deliveries are showing increased strength from day to day, strong reports being received from all primary markets. There are still some speculative inquiries for rubber reaching the dealers, but trading, on the whole, is along trade lines.

Tire manufacturers have been doing considerable buying during the past few weeks, and the retreading concerns have also been extensive purchasers. With many tire companies operating day and night shifts to keep up with their orders, dealers declare that the outlook in the market for crude is a rosy one and predict continued improvement in condition.

	Cents per pound.		
Para—Up-river fine	54½	@	55
Up-river medium	52	@	....
Up-river coarse	31½	@	....
Caucho ball	33	@	....
Islands fine	48	@	....
Islands coarse	21½	@	....
Cameta	22½	@	....
Madeira fine	62	@	....
Knapsack	73	@	....
Ceylons—Smoked sheets, ribbed.	41½	@	42
Smoked sheets, plain.....	40	@	....
First latex pale crepe.....	43	@	44
Amber crepe	Nominal.		
Clean brown crepe.....	54	@	....
Rio Nunez string.....	55	@	....
Palembang	14	@	....
African	33	@	....
Prime Surinam sheets.....	1.02½	@	....
Centrals—Corinto prime	34	@	....
Esmeralda, prime	34	@	....
Mexican scrap.....	25	@	....
Balata sheets.....	57	@	....
Guayule, wet	25	@	....
Balata, block	57	@	....

Among the Dealers

Bashlin's Auto Tire Shop, Charlotte, N. C., has changed its name to the Progress Auto & Tire Shop.

The Mills Tire Company, Raleigh, N. C., will erect a building to be occupied by its repair department and truck and solid tire departments. This building will be of reinforced concrete.

Martin Naumes and Bamber Brothers will erect a modern garage and service station on Main Street, Newberry, Mich., in connection with which they will conduct a tire repair business. The concern wil be known as Naumes-Bamber Motor Sales Company.

W. B. Harwood, automobile supply dealer at Merrimack and Tremont Streets, Lowell, Mass., has contract to handle Firestone tires.

The Abrams Tire Company, 7 Second Street North, Great Falls, Mont., has opened for business under the management of Jack Abrams. The company will retail Racine tires, tubes and accessories.

The National Tire & Auto Supply Company, 916 North Broad Street, Philadelphia, Pa., has been opened by Mayer Albert, who is assisted by Maxwell Albert and M. R. Fisher.

The Blue Streak Tire & Vulcanizing Company, 1207 Broadway, Nashville, Tenn., has opened a modern vulcanizing establishment. W. E. Scott, formerly with the Jetton Tire Company, the Connor Tire Company, and the Goodyear Tire and Rubber Company, is at the head of the new concern.

A tire sales and repair station has been opened at 1103-1105 Jefferson Avenue, Toledo, Ohio, by Walter Huber, formerly associated with John Wahlen in the Ontario Tire & Rubber Supply Company. The new concern is the sole property of Mr. Huber and will be conducted in his name and under his personal supervision.

Earl Watts has added a special tire and accessories department to his garage in Third Street, Dixon, Ill.

The Point Tire Company, Flint, Mich., has opened a branch at 920 N. Saginaw Street, that city, in charge of Oscar S. Friedman, of Grand Rapids, Mich. This branch will specialize in rebuilt tires of all makes, besides carrying a line of new tires, inner tubes and reliners.

William H. and Louis D. Beck have opened a store at 615 East Michigan Avenue, Lansing, Mich., to be known as the Beck Brothers Service Station. They will handle sporting goods, tires and accessories, and specialize in tire repairing and vulcanizing.

Harry M. Guyett, Sheboygan, Wis., has sold his tire repair and vulcanizing outfit to the Falls Auto Company, that city, which will now do tire repair work at its garage in Pine Street.

The Automobile Owners' Tire Corporation, distributors of "Hawkeye" tires and inner tubes, has opened a branch office in Aberdeen, S. D., at 208 South Lincoln Street. S. E. Blekre, formerly connected with the International Harvester Company, is manager, and C. A. Ellerman, who also was associated with the International Harvester, is general traveller.

The Arkansas Tire Company, a new concern, will soon start business in Little Rock, Ark., carrying a complete line of high grade standard fabric and cord tires. R. E. Shook, who has had a wide experience in the rubber business, will be in charge.

The Pacific Tire Sales Company, 1657 Van Ness Avenue, San Francisco, Cal., has been reopened by A. L. Jacobson.

H. W. Van Bilderbeek has opened a vulcanizing shop and tire store at 1205 Market Street, San Francisco, Cal.

The Guarantee Vulcanizing Works has been established at 4 East Washington Street, Stockton, Cal.

R. A. Hollis has opened a vulcanizing shop and tire sales store at 497 Golden Gate Avenue, San Francisco, Cal.

The tire vulcanizing shop of S. R. Bennett has been removed to larger quarters at 2509 Broadway, Oakland, Cal.

S. Pulfer, operating the Tire Sales Company, at 620-632 Golden Gate Avenue, San Francisco, Cal., has opened a branch tire store at 620 Van Ness Avenue under the name of the American Tire & Rubber Company.

A factory branch has been opened at 1110 Harmon Place, Milwaukee, Wis., by the McGraw Tire & Rubber Company, Cleveland and East Palestine, Ohio. R. C. Fay, formerly with the Kelly-Springfield Tire Company, New York City, is manager; C. M. Cummings formerly with the Kansas City branch of the McGraw, is office manager; G. C. Van Atta, formerly of The B. F. Goodrich Company, is special representative, and A. F. Bihl is South Dakota representative.

H. S. Turner has relinquished his interests in the T. & T. Tire Company, Little Rock, Ark., to L. H. Theobald, who assumes complete ownership of the company. The business will be continued under the same name, and several enlargements and improvements will be made.

E. W. Silver, Braman, Okla., is selling his entire stock of tires and automobile accessories.

In Ardmore, Oklahoma, Mrs. Ada L. Roland has established a business at 114 East Main Street, known as the Oklahoma Tire Company.

A new tire business has been opened at 717 West 10th Street, Los Angeles, Cal., by George Merrill and Edward Winchel. Mr. Merrill was connected for a number of years with the Los Angeles branch of The B. F. Goodrich Company. Mr. Winchel has been with both the Troy Motor Sales Company and the Howard Automobile Company, Los Angeles.